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A Course of Lectures ON URINE, URINARY DEPOSITS, AND CALCULI.

DELIVERED AT THE PATHOLOGICAL LABORATORY, DURING THE SESSION 1857-58.

BY

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LECTURE V.

URINE IN DISEASE. SOLUBLE SUBSTANCES PRESENT IN URINE IN DISEASE WHICH DO NOT EXIST IN THE HEALTHY SECRETION. ALBUMEN. *Of Detecting the Presence of Albumen; Tests; Nitric Acid; Heat; Anomalous Results in Employing these Tests; Apparent Presence of Albumen in Urine which contains none; Phosphate resembling Albumen; Uric Acid resembling Albumen; Cases. Apparent Absence of Albumen in Urine which contains a large Quantity; Cases. Cause of the Precipitation of Albumen by Heat being prevented by a Trace of Nitric Acid. Other Tests for Albumen. On Estimating the Quantity of Albumen. Peculiar Substance in Urine allied to Albumen. Of the Importance of Albumen in Urine in a Clinical point of view. Dropsy in Disease of the Kidney.* BILE. *Tests. Nitric Acid. Heller's Test. Pettenkofer's Test. Yellow Colour of the Cells, etc., in the Urinary Deposit.* SUGAR. *General Characters of the Urine in Diabetes. Diabetic Sugar. Tests for Diabetic Sugar; Moore's Test; Trommer's Test; Barreswill's and other Solutions. On Testing for Sugar when only Traces are present. Circumstances interfering with the Action of Trommer's Test. Of the Yeast Test. Maumené's or the Perchloride of Tin Test. Bismuth Test. Of Estimating the Quantity of Sugar; volumetrically; by Fermentation; by Dr. Garrod's Method; by the Polarising Saccharimeter. Circumstances under which Sugar is excreted in the Urine. Analyses of Urine in Diabetes.* OTHER SOLUBLE SUBSTANCES WHICH ARE NOT PRESENT IN HEALTH. LEUCINE. TYROSINE. INOSITE. ACETONE. CYSTINE.

[*Concluded from page* 393.]

The Experiments of Reynoso and Déchambre repeated, with Negative Results. The urine was tested as in Reynoso's experiments, except that carbonate of soda was used to precipitate the excess of subacetate of lead, instead of chloride of sodium. The specimens of urine passed by six patients under the influence of chloroform, for periods of time varying from ten minutes to half an hour, that of an old lady aged 87, of an old man aged 96, and of two children suffering from epilepsy, were carefully examined. In most, the solution became brown upon being boiled; but no opalescence or precipitate was produced. The urine of a healthy man, aged 24, was also subjected to examination, and became brown upon being boiled with the copper test. The results of numerous other experiments upon specimens of urine known to contain no sugar led me to the conclusion that, in all the above cases, the urine was perfectly free from this substance. Kletzinsky has repeated Reynoso's experiments, and has failed to confirm his conclusions. Dr. Moore of Dublin (Heller's *Pathological Chemistry of the Urine*, translated by W. D. Moore, A.B., M.B.T.C.D) has examined the urine of twelve men and women whose ages varied from sixty to eighty-three, but was unable to detect sugar. We may, therefore, conclude that there is at present not sufficient evidence to prove that sugar is *habitually* excreted in the urine of old people, or by patients suffering from chest-disease, or by those under the influence of chloroform, etc. It is probable that it may be occasionally met with in some of the above cases.

Analyses of Diabetic Urine. It is difficult to estimate the urea in diabetic urine by the old process; but the proportion may be ascertained by the volumetric method, which will be described in a future lecture. The following analyses show the composition of the urine in some cases of diabetes.

47. Urine from a girl aged 19. Specific gravity, 1037; acid, clear, pale.

48. From the same. Specific gravity, 1036; acid.

49. From a man aged 30, about one month before death. Specific gravity, 1023.

50. From a woman aged 28, a week before death. Acid; specific gravity, 1027.

51. From a patient who was passing sixty ounces of urine daily. Reaction acid; specific gravity, 1021.

Analyses.

	47		48		49	
Water	916·50		894·90		946·8	
Solid matters	83·50	100	105·10	100	53·2	100
Urea, Extractives, Uric acid			82·29	78·2		
Alkaline salts, Earthy salts	10·66	12·96	3·82	3·63	5·44	10·22
Sugar	not estimated.		18·99	18·08	20·24	38·04

	50		51	
Water	934·2		946·00	
Solid matter	65·8	100	54·00	100
Urea, Extractive matters	16·94	25·74	21·54	39·18
Uric acid	1·64	2·49		
Alkaline salts, Earthy salts	5·82	8·84	3·76	6·96
Sugar	41·40	62·91	28·50	52·7

Analyses 52, 53, 54 represent the composition of the urine in a case of diabetes now under my care in the hospital. The patient was a healthy looking girl, only eighteen years of age. She had been suffering from the disease for about three months. Various plans of treatment were tried, without any marked results. She remained under treatment for six weeks, and then left the hospital; but she will probably again come under our notice in a short time. She drank from four to six pints of fluid daily; and, when living on a moderate meat diet, with a small quantity of bread, passed rather under a gallon of urine. The urine was analysed from day to day; and I select three specimens for illustration. When the last was obtained, her diet was restricted to bran-biscuits and milk. The results are expressed in grains, and represent the quantities passed in twenty-four hours. [*See Table, next page.*]

Let me now refer very briefly to some other *soluble substances* not present in healthy urine, which have been detected lately in small quantities in certain morbid specimens. These are, *leucine, tyrosine, inosite, acetone,* and *cystine.*

LEUCINE.

Leucine occasionally occurs as a deposit from the urine; but more generally it is held in solution, and can only be obtained by concentration of the fluid when it crystallises out in the form of small sphericles, which are composed of acicular crystals which radiate from a common centre. This substance has of late been found in many of the solids and fluids of the animal body. It is not very soluble in water (one part in twenty-seven), but more so in alcohol. It crystallises from aqueous solutions, for the most part in spherical masses, which exhibit a radiated arrangement. From alcohol, leucine is deposited in the form of pearly scales, somewhat resembling cholesterine; but these are composed of small sphericles. Dry leucine can be sublimed without change. Leucine has been

Analyses.

	52		53		54	
	March 20th.	In 100 of solid matter.	April 2nd.	In 100 of solid matter.	April 23rd.	In 100 of solid matter.
Quantity of fluid drank in 24 hours	64708·75		36908·75		36968·75	
Specific gravity	1037		1043		1043	
Reaction	Acid.		Acid.		Acid.	
Water	78653·75		69364·50		50857·625	
Solid matter	8846·25		8510·50		6017·375	
Urea	8750·00	98·910	512·20	5·430	455·000	7·561
Sugar			7549·12	88·703	4889·326	81·253
Organic matter			141·07	2·447	501·287	8·333
Fixed salts			308·11	3·620	171·762	2·853

found in the saliva, pancreatic juice, and in the pulmonary tissue of the ox (Cloetta, *Chemical Gazette*, 1856, p. 61). Frerichs and Städeler have detected leucine in the blood, urine, and bile of patients suffering from typhus, small-pox, and other exanthemata. Dr. Thudichum found leucine in the urine of a man whose liver yielded a large quantity of it (*Treatise on the Pathology of the Urine*, 1858). It was obtained by concentrating the urine. This substance is probably formed in the liver, and in health rapidly converted into other compounds. In certain diseases, it is to be detected in very considerable quantity. Crystals of leucine may often be seen in sections of livers of patients who have died of jaundice. Frerichs has given several figures of leucine crystals in the liver, and also in the urine (*Pathologisch-Anatomischer Atlas zur Leberkrankheiten*, von Dr. F. T. Frerichs, Braunschweig, 1858). It occurs especially in the urine of patients suffering from acute yellow atrophy of the liver.

No satisfactory tests for leucine are yet known. If it can be obtained pretty pure by repeated recrystallisation, the dry leucine may be sublimed. The sublimate, composed of aggregations of rhombic plates, could not be mistaken for anything else. Urate of soda and many other substances crystallise in spherical globes, like leucine. Crystals of this form, however, which are soluble in alcohol, and again crystallise in spherules from an aqueous solution, can hardly be anything but leucine. This substance cannot, therefore, be recognised by the form of the crystals alone.

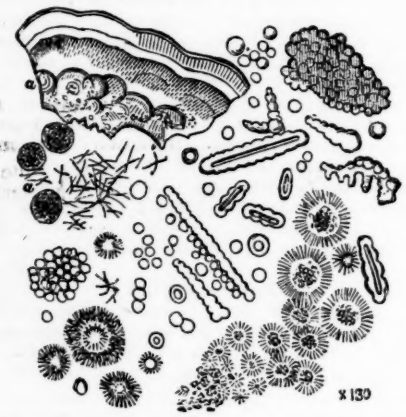

Fig. 9.—Crystals of Leucine. Those represented at *a* were crystallised from water. The rest were obtained from an alcoholic solution.

On obtaining Crystals of Leucine from the Urine. The extractive matters often interfere with the crystallisation of the leucine from urine, and the concentrated extract often remains for days without undergoing any change. Frerichs (*Klinik der Leberkrankheiten*, Band 1, s. 221) recommends that the concentrated urine should be digested for some time with cold absolute alcohol. By this means, the extractive matters are gradually dissolved out. The residue is then to be treated with boiling spirits of wine; and leucine crystallises out as this solution cools. It may be purified by recrystallisation. The extractive matter may be in great part separated by precipitation with acetate of lead.

TYROSINE.

This substance has been detected in the urine of typhus fever by Frerichs and Städeler. Like leucine, it is probably produced in the liver. It has been detected in this organ by Frerichs, Dr. Thudichum, and many other observers. It has been extracted from several animal fluids. Tyrosine crystallises in long white needles, and is very slightly soluble in cold water. It is dissolved by boiling water, alcohol, ether, the mineral acids, and alkalies. It may be prepared by boiling horn, feathers, or hair, with sulphuric acid for forty hours. The dark brown liquid is to be made alkaline with milk of lime, warmed, and then filtered. Sulphuric acid is added to

Fig. 10.—Crystals of Tyrosine from a solution in boiling water.

neutralisation, and crystals are deposited upon evaporating the liquid. A very delicate test for this substance has been proposed by Hoffman. A solution of nitrate of protoxide of mercury, nearly neutral, is to be added to the solution suspected to contain tyrosine. If this body be present, a reddish precipitate is produced, and the supernatant fluid is of a very dark rose colour. Tyrosine crystallises in long white needles, which are aggregated to form brush-like masses. De la Rue found tyrosine in the cochineal insect. This is doubtless one of the substances resulting from the disintegration of albuminous substances. I have found it in considerable quantity in urine which contained much uric acid, and had been left to stand in a warm place for many weeks.

INOSITE.

Inosite was discovered by Scherer in the juice of muscle, after the creatine and creatinine had been separated. It is termed muscle-sugar, and may be obtained in the form of colourless prismatic crystals, which are efflorescent. Inosite does not reduce the oxide of copper to the state of suboxide, as is the case with diabetic sugar and grape-sugar. It tastes sweet, and has the same composition as the latter substance. Inosite may be detected by evaporation nearly to dryness in a platinum basin, when, if a little ammonia and chloride of calcium be

added, a rose colour is produced, especially if the mixture be again concentrated by evaporation.

Cloëtta has found inosite in the urine in Bright's disease, but has failed to detect it in the healthy secretion. He has discovered it in the lungs, liver, spleen, and kidneys. The lungs also contain traces of uric acid, taurine, and leucine. M. Hohl has lately recorded a case of diabetes in which a large quantity of inosite was obtained from the urine (*Gazette Hebd. de Méd. et de Chir.*, 1859, p. 221; *Journal de la Physiologie*, No. vi, p. 344). In this case, the proportion of sugar gradually diminished, and at the same time the quantity of urea excreted became less, while the inosite gradually increased in amount until upwards of *three hundred grains* of this substance were passed in the twenty-four hours. This observation is one of great interest in connexion with the pathology of diabetes.

ACETONE.

Dr. Petters, at the suggestion of Dr. Lerch of Prague, sought for acetone in the urine of a case of diabetes, and discovered it both in the blood and urine (*Vierteljahrsch. für die Pract. Heilkunde*, Prag, 1857, vol. iii, p. 81). The peculiar smell of diabetic urine is to be attributed to the presence of acetone, according to this observer (Thudichum, *Pathology of the Urine*, p. 315).

CYSTINE.

Cystine is found in a state of solution in the urine in some cases, although it more usually occurs as a deposit. We shall therefore consider it more particularly under the head of urinary deposits. Julius Müller (*Archiv der Pharmacie*) obtained some urine from a boy 6½ years of age, which contained cystine in solution. The urine was alkaline. The cystine was precipitated in the crystalline form by the addition of excess of acetic acid. Crystals of cystine are represented in Plate x, figs. 1, 2, 3, 4, of *Illustrations of Urine, Urinary Deposits, and Calculi.*

I have ventured to occupy some time in drawing your attention to the characters of some substances the presence of which in urine has only very recently been demonstrated. Probably, when the various materials removed in this excretion shall have been more thoroughly investigated, and when we know more relating to the precise conditions under which they are formed in the animal economy, the treatment of many diseases will be placed on a sounder basis, and we shall be able to relieve sufferings and prevent the progress of morbid changes over which we have now very little control. It is true, there are many who consider all this minute scrutiny and scientific investigation as useless, or at least unnecessary and unpractical. This is a state of mind which it is difficult to understand; for it seems to me perfectly certain that the more minutely our investigation of diseased processes is carried out, the more we shall know about them, and the better able shall we be to suggest plans of treatment to combat the abnormal changes. That all this will ultimately lead to great practical results in treatment, I believe most sincerely; and I feel that any amount of time devoted to such researches is usefully and advantageously spent. If, then, I have tired you with some of these chemical details, my earnest belief that they are useful to the progress of medicine, and the desire, therefore, to see you prosecute such researches, must be my excuse.

In the next lecture, I shall have to describe the character of casts of the uriniferous tubes, which vary much in different renal diseases. But it is not possible to discuss this subject profitably without referring to many points connected with the anatomy of the kidney; and I therefore propose to give a brief outline of the anatomy of this organ, and especially of those parts concerned in the formation of casts.

ARREST OF DECAY. You remember reading how upon a day not many years since, certain miners, working far underground, came upon the body of a poor fellow who had perished in the suffocating pit forty years before. Some chemical agent to which the body had been subjected—an agent prepared in the laboratory of nature—had effectually arrested the progress of decay. They brought it up to the surface, and for awhile, till it crumbled away through exposure to the atmosphere, it lay there, the image of a fine sturdy young man. No convulsion had passed over the face in death; the features were tranquil; the hair was black as jet. No one recognised the face—a generation had grown up since the day on which the miner went down his shaft for the last time. But a tottering old woman, who had hurried from her cottage at hearing the news, came up, and she knew again the face which through all these years she had never quite forgot. (*Fraser's Mag.* for June.)

Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

LIVERPOOL NORTHERN HOSPITAL.

CASES OF ACUTE DISEASE OF THE CHEST.

Under the care of A. T. H. WATERS, M.R.C.P., Physician to the Hospital.

[*From Notes by* MR. JACKSON, *Clinical Clerk.*]

CASE I. *Pneumonia: Local Blood-letting: Administration of Antimony: Recovery.* W. Edwards, aged 29, sailor, a stout, strong, muscular man, was admitted into the Hospital on March 29th, 1860. Six days before admission, whilst on board ship, he took cold, and was obliged to lie up for two days; he resumed his work on the third day, but was again compelled to give up. He had had no rigors, but a good deal of dyspnœa and cough, and had slept but little. He had taken some medicine, and a blister had been applied.

On admission, he complained of shortness of breath; he had no pain in the chest, except on taking a deep inspiration; the face was much flushed; the skin hot and burning; the pulse 110, full and strong; respirations 40 per minute; the tongue was dry and brown; there was much general distress. Over the whole of the back of the left lung, crepitation was heard, with bronchial breathing and bronchophony, which were especially loud at the upper part. There was less movement of the left side of the chest than of the right. There was dulness on percussion over the back of the left lung, extending as far forwards as the axilla. There was slight crepitation at the back of the right lung, but no dulness. The anterior parts of both lungs were resonant, and their breath-sounds normal. The heart-sounds were also normal. He was cupped between the scapulæ to twelve ounces.

℞ Antim. potassio-tart. gr. j; liquoris ammon. acetatis ℥ss; aquæ ℥j. Fiat haustus tertiâ quâque horâ sumendus.
Low diet.

March 30th. He had slept a little. The face was still flushed and dusky; pulse 106; the skin was less hot; the tongue moist, furred. He had no sickness. The sputum was very scanty. The auscultatory signs were the same, not increased in extent.

March 31st. He had slept well. The pulse was 80; the respirations 34; tongue moist and cleaner. He had no pain in the chest; there was less dulness at the back of the left lung, and the extent of surface over which crepitation was heard was less. The breath-sounds of the right lung were normal. Beef-tea and arrowroot were ordered.

April 2nd. A herpetic eruption appeared around the mouth and on the tongue. The lung-symptoms were improving. He was ordered to take the mixture three times a day only.

April 3rd. He expressed himself as feeling quite well. There was no crepitation over the back of the left lung, but dulness with bronchial breathing and bronchophony over a small space at the lower part; elsewhere, the breathing was good. The medicine was omitted, and he was ordered chop-diet.

He continued to improve rapidly; and on the 7th, the breath-sounds were normal all over both lungs, except just at the lower part of the left, where there was slight crepitation on taking a deep inspiration. He said he felt quite well, and wished to go out. Discharged.

CASE II. *Pneumonia: Administration of Antimony: Recovery.* Lewis Jackson, aged 47, sailor, was admitted into the Hospital on March 14th, 1860. He was a coloured man, in good condition, stout and muscular. Having been previously in good health, he was exposed to severe cold about a week before admission, and was soon after seized with pain in the epigastrium and cough. This compelled him to give up his work. He was attended by a surgeon, who applied leeches to the seat of pain, and gave him medicine.

On admission, he complained of pain in the epigastrium, dyspnœa, and want of sleep. The skin was hot; pulse 92; there was pain in the left side on taking a deep inspiration, and

less movement there than in the opposite side. There was good breathing all over the right lung, and the percussion-sound was normal. Fine crepitation was heard at the back of the left lung, extending as high as the spine of the scapula, and also in the axilla; elsewhere, the breathing was good. There was dulness on percussion corresponding with the extent over which crepitation was heard. The sputum was thick, tenacious, somewhat rust-coloured, and scanty. There was but little general distress.

He was ordered to take one-eighth of a grain of antimony, with liquor ammoniæ acetatis mixture, every three hours; and to have low diet and beef-tea.

March 16th. The expectoration was still rust-coloured and scanty. He had slept better. He complained of a dull aching pain. Pulse 80. The auscultatory signs were the same. A blister was ordered to be applied over the back of the left lung.

March 18th. He expressed himself as much better; the pulse had fallen to 68; the sputum was less rusty; the crepitation was of a coarser character, and the dulness less. He was put on ordinary diet.

March 19th. Crepitation could only be heard after deep inspiration.

March 21st. The crepitation had disappeared, and the normal lung-sound had returned. The treatment was stopped.

March 23rd. He was discharged.

Case III. *Pleuro-pneumonia, with Effusion into the Pleural Cavity: Local Bloodletting, etc.: Recovery.* Edward Whiteland, aged 19, sailor, moderately stout, and of fair muscular development, was admitted into the hospital April 23, 1860. He was quite well, and had done his work on board ship up to three days before admission. On the night of the 20th April he slept in a draught, and on the following day he began to feel ill, and was obliged to take to his bed in the evening. He had had cough, severe pain in the right side, difficulty of breathing, and rigors.

Seen on the 24th. His face was flushed; the expression was anxious; pulse 106, rather full and hard; respirations 40; the skin was dry, not very hot; the tongue furred. He complained of severe pain in the right side, much aggravated by a deep inspiration; there was a short, dry, hacking cough. He could speak only in a whisper.

There was dulness over the lower part of the right side of the chest, extending nearly to the lower angle of the scapula. At the lowest part of the chest the respiratory murmur was absent, but higher up a faint sound was heard, increasing in intensity towards the upper part; it was rapid and catching. No friction sound could be heard; there was exaggerated breathing all over the left lung; the respiration was superior thoracic, the lower intercostals of the right side not acting at all.

He was ordered twelve leeches to the right side; three grains of calomel and a senna draught; and low diet.

April 25th. He had slept a little, and had less pain. Pulse 100, full; respirations 34. He was still much distressed. He was ordered an eighth of a grain of antimony with eight grains of nitrate of potash in acetate of ammonia mixture every four hours; and a pill of three grains of calomel and one of opium at night.

April 26th. He had slept; pulse 104; respirations 26; the face was less flushed; the tongue moist. He had less pain in the side, but more in front of the chest; the dulness extended nearly to the spine of the scapula, and there was absence of respiratory murmur nearly to the same level. Eight leeches were ordered to be applied to the right side; the pill to be repeated.

April 27th. He took two grains of calomel and a grain and a half of opium at night

April 28th. He complained of very little pain; he was much relieved by the leeches, which had bled very freely. Pulse 96; respirations 30; tongue cleaner. He had taken but little food. He was ordered a grain and a half of opium every night, and to continue the mixture without the antimony.

May 2nd. His face had assumed a natural colour and appearance; he was free from pain; the tongue was clean; pulse 110, compressible. He had slept well, and had taken more food, beef-tea, etc. The dulness on the right side extended nearly up to the spine of the scapula, but was less marked; the breath sounds were heard at the upper part, but not below; no friction sound could be detected. A large blister was ordered, and four ounces of wine daily.

May 5th. The pulse was 104; the cough had been very troublesome; he had expectorated a large quantity of tenacious mucus; the respiration was more easy, and he was free from pain. He was ordered six ounces of wine daily.

May 8th. The pulse was 100; the dulness on the right side had diminished, but the respiratory sounds could not be heard at the lower part of the lung; he could still speak only in a whisper. Chop diet was ordered.

May 11th. There was slight return of fever, and bronchitic râles were heard at the upper part of the right lung. The nitre mixture was stopped, and a saline, with ipecacuan wine and compound tincture of camphor, was ordered; and a mustard poultice to the chest.

May 13th. He had expectorated freely, and was much relieved.

May 14th. The pulse was 100; the right lung was free from bronchitic râles; pleural friction-sound was heard at the anterior part; there was still dulness behind, and crepitation was distinctly audible over the lower part of the lung (the fluid in the pleural cavity being now absorbed, the lung came into contact with the walls of the chest, and the *crepitus redux* of the inflamed organ was heard). He was ordered a pint of porter daily, in addition to his wine.

May 17th. A blister was applied to the right side.

May 18th. He was ordered nitro-muriatic acid, with bitter infusion. He continued to improve steadily, the dulness of the lung gradually diminishing, but his voice being very slow in returning; he was allowed any nourishment he could take.

May 25th. He felt so well that he wished to be discharged. Slight dulness still remained at the lower part of the affected lung.

[*To be continued.*]

Original Communications.

GONORRHŒAL AND SYPHILITIC RHEUMATISM.

By Henry Duncalfe, Esq., M.R.C.S., West Bromwich.

[*Read before the Queen's College Medico-Chirurgical Society, Birmingham.*]

Rheumatism, as connected with and arising from venereal disease, was first described by Sir Astley Cooper, but had been recognised by Cline and others before the time of Sir Astley's notice. That cases of acute and chronic rheumatism, acknowledging a gonorrhœal or syphilitic origin, do occur, is a fact now admitted; but neither any peculiar type nor modification can be detected, to distinguish such cases from those of simple origin.

The painful chronic, as also the acute rheumatic sequelæ of venereal disease, occur generally in enfeebled constitutions, either from hereditary taint, or oftener from the constitutional powers being broken down and exhausted by irregularities of living and other excesses. It is a difficult matter at all times to obtain a true history of such lives; and the wan, pale, and dejected appearance, which the countenances of such patients assume, form not uncommonly the only true indices to the origin of the malady; and patients will so emphatically deny ever having had any venereal taint, that more cases of rheumatic complications may occur than are given credit for.

This paper has no pretence to research or originality. I have selected a few of the less doubtful cases, to illustrate the forms which the disease may assume; and I shall relate one case to shew that the diagnosis may sometimes be difficult, and that the primary cause may be confounded or mistaken; and I shall hope to elicit some information on the value of remedies which my own limited experience will oblige me to mention with a certain reserve.

Thus I want to shew—

That rheumatism, when it occurs during the progress of venereal disease, is to be considered not simply as a concomitant, but as dependent on that disease;

That it is important to determine the relative connexion, in order to alleviate the extreme suffering, and prevent the untoward and fearful results which would otherwise ensue.

I wish also to inquire whether there is any form of treatment which is capable of producing a more decided effect in cases of specific than of non-specific origin.

Case I. A youth, 19 years of age, had contracted a gonorrhœa, for which he applied to a chemist, and obtained a copaiba mixture, which rapidly checked the discharge; but

within a week he was seized with severe pain in the right groin. He was unable to stir in bed when I first saw him. His countenance was expressive of suffering; his skin was hot and perspiring; and his tongue deeply coated, with red edges. There was swelling and tenderness over the anterior and inner aspect of the thigh. The pain was increased by every movement of the limb, and by the merest touch; and towards night it became agonising. The urine was scanty and deep coloured, depositing lithates on cooling; the bowels were costive; and there remained a gleety discharge from the urethra. He had chordee at times, but not extreme; and slight scalding at the time of passing water. He was treated with alkalies, salines, and diaphoretics, without making any progress; and in turn the right knee became affected, then the ankle, and afterwards the left knee. After about eighteen or twenty days, the pain and swelling subsided in the hip; but the knee remained very painful and swollen. It was finally opened, allowing the exit of a large quantity of bloody pus. During the course of the disease, when several remedies had been tried without his having experienced any relief, colchicum in full doses was combined with the saline mixture; and he said he found more relief from it than from anything else he had taken. In time, the pain and swelling subsided in the left knee and right ankle; his leg was kept on a straight splint; and he was well supported; so that, under chops, porter, steel, and quinine, he contrived to escape with a stiffened knee.

CASE II. A strumous looking man applied for relief of pain in his knee. He had some difficulty in walking; but there was no external swelling or redness. On the day following his application at my surgery, I was sent for to see him at his lodgings. I then found an evident fulness about the knee-joint, and pain on handling the limb, more especially when striking the bottom of the foot. In the course of two or three days, both his eyes became inflamed, and gave him very severe pain. There was great intolerance of light, and he dreaded the approach of night. Salines with colchicum were given; and, after three days, his eyes got well. The pain and fulness diminished in the knee; and a gradually increasing pain seized him in the right side, over the region of the liver; he had frequent vomitings; and in two days he was jaundiced. Purgatives and calomel, with Dover's powder, in time produced bilious evacuations; and he appeared to be progressing favourably, when the gonorrhœal discharge, which had decreased to a mere globule, and then only on pressing the gland, increased to beyond the extent it had ever been; and he had erratic rheumatic pains in different muscular structures. Colchicum gave him no relief at this time. Guaiacum was substituted, with Dover's powder at bedtime; he was put on good diet; and the mineral tonics were afterwards exhibited. For a long time he continued to suffer from wandering pains, and occasionally inflammation of the conjunctivæ; and the remnant of his gonorrhœa proved as intractable as his rheumatism. He became very impatient with the annoyance of the gleet; and I gave him large doses of copaiba, in a cubeb mixture, which soon cleared away his gleet, and his rheumatism also. He has since had gonorrhœa, but without any other complication.

CASE III. A dissipated young woman requested my attendance in her approaching confinement. She told me that she had led a very irregular life, and had been on the town for several years, till within twelve months prior to the date of her application to me, when she got married, and soon afterwards became pregnant. She had contracted gonorrhœa on more than one occasion; and sometimes used to take medicine, but without any regularity. When first she experienced pains about her limbs, she thought they were due to having taken cold. She had at that time a vaginal discharge, from which she had suffered for a lengthened period. At the time of my inquiries, she complained of much muscular pain (described by herself as gnawing), more particularly about the flexor muscles of the thighs and calves of the legs. The unceasing aching character of the pain was always augmented in the evening; and she had exhausted every posture and change in bed, in the vain hope of finding some ease. With the limited means at her disposal, she had purchased medicines, such as had been recommended by different chemists; but the pain never left her for any length of time, and always got worse at the catamenial periods. Of late, it had been so tormenting that she had resorted to the practice of eating opium, of which she was taking a pennyworth a day. The piece she showed me was the size of a small nut. I gave her the ethereal tincture of guaiacum, which did her much good; and she improved very much both in condition and appearance from the administration of nitric acid; but, soon after her confinement, I lost sight of her, and am unable to state what was the further progress of the case; from the wretched state, however, in which she lived, it is probable that she resorted to her former mode of life, and to opium as her only refuge.

These cases present points of practical importance. Before relating them, I said I had selected "the less doubtful"; and I used the expression advisedly, for it may be asked whether symptoms analogous to gonorrhœa can exist as an effect or sequence of simple acute rheumatism? To this question I would reply, that I have known an instance of gout which was attended with a discharge like to that of gonorrhœa; and I adduce the testimony of Sir B. Brodie, who, in his *Treatise on Diseases of the Joints*, says, "I shall have occasion to notice some very remarkable cases of inflammation of the synovial membrane, preceded by purulent inflammation of the urethra and purulent ophthalmia, to which the name of gonorrhœal rheumatism is commonly applied, though the relationship of the disease to rheumatism extends no further than a partial resemblance in the symptoms." The cases quoted as examples will be found from pages 43 to 50 of the last edition. In justice to the subject, I should quote also this passage from the same author: "That though inflammation of synovial membranes take place independently of gonorrhœal infection, there seems to be no doubt but that it occurs in most instances as a *consequence* of gonorrhœa."

Of all rheumatisms, the gonorrhœal is by far the most painful; and whilst I have noticed that it may attack various structures, the synovial membranes and sheaths of tendons are its more ordinary seat. As far as my own experience teaches me, I find the muscular form to be less acute, often chronic, and prone to come on after the gonorrhœa has existed for some time; whilst the acute articular rheumatism follows the earlier days. The nature of the disease from its onset differs from most other affections of the joints, by the violence of the pain even before any swelling is manifested, and by the tendency for several joints to become affected at the same time or in rapid succession; and differing in its termination by not leaving the joints permanently impaired. Brodie says "the inflammation is for the most part of that kind which terminates in an effusion of serum, and not of coagulated lymph; but sometimes it is more intense, leaving the synovial membrane thickened, and the joint more or less stiff; and I have known a few cases in which the cartilages become ulcerated, with great pain at the time, anchylosis being the ultimate result." Case I presented one of these unusual terminations.

With respect to the treatment of rheumatic synovitis, the salines seem to be the most serviceable; and I find the hydrochlorate of ammonia, in doses of from eight to ten grains, with an equal quantity of nitrate of potash, a very useful combination. I would especially mention colchicum, for I believe this particular form of disease to be especially relieved by its administration; and though I would not place reliance on any one remedy in the treatment of any of the forms of rheumatism, I am nevertheless disposed to regard colchicum in these cases as being next to a specific. As the disease becomes chronic or subacute, colchicum ceases to relieve; and, in the acute form, I think I am right in my conclusion when I say that its value is proportioned to a scanty secretion of urine, of high specific gravity, and loaded with lateritious sediment. In the subacute and chronic forms, and especially in muscular rheumatism, guaiacum succeeds to the extent which colchicum does in the acute synovial form. "It acts", Dr. Seymour says, "not as a stimulant, but as an evacuant, provoking purging, perspiration, and a flow of urine in a very violent manner." Sometimes one, sometimes all these effects, he says, follow the use of the medicines. Fuller speaks highly of the use of guaiacum in some of the chronic forms of the disease; and, in cachectic conditions, I can speak to its curative power when combined, as Brodie recommends, with cinchona. Locally, warm fomentations give much ease; occasionally, leeches may be required, but patients do not bear depletion; and while the swelling and redness seem to indicate very acute action, there are often symptoms which lead to an opposite conclusion.

I mentioned in the last cited case, that the patient had for some time been accustomed to take large doses of opium. So much lately has been said and written about the curative powers of this drug in rheumatism, that one would have thought it ought to have done some good in this case; but its failure was quite in accordance with my own experience of its non-efficacy in this, as in all other rheumatisms. The relief which follows its administration is only what occurs in any other painful disease; and I think it is about as capable of

curing rheumatism as it is of cancer, when used to allay pain in that affection; nay more, I believe that it often does harm by the excessive diaphoresis which it occasions.

Case iv. The following case will illustrate two varieties of syphilitic rheumatism—the periosteal and muscular; and will suffice to introduce the remarks I shall have to offer in this division of the subject. My patient was a muscular well constitutioned young man, whose boast it was that he had never been obliged to lie by for a day from any illness; indeed, he seemed to be proof against all diseases but gonorrhœa. Eight years ago, after a suspicious intercourse, he had gonorrhœa for the first time, with all its symptoms in a superlative degree—swelling of the penis, copious discharge, chordee, bubo—requiring him to keep his bed for five weeks. Two years afterwards, he again had gonorrhœa, but with symptoms so modified as to be almost uncared for; and, after consuming some three score capsules, and tanning his urethra with astringent injections, he got well, and so remained till within five months before the time when I first saw him. From four to five days after sexual intercourse, he perceived a purulent discharge from the urethra; but, as it was unattended by pain or other annoyance, he made himself contented about it; and it was about this period, three weeks from the commencement, that with the yeomanry troop he went to do duty for a week prior to the annual review. He was there exposed day after day to a drenching rain; and that, coupled with the evening routine of a soldier's life, no doubt tended to the development of the rheumatism which soon followed. As soon as he settled down to his ordinary employ as a contractor, he perceived, after walking along the uneven surface of a line of a railway, that his feet were very tender, especially the heel, about where the plantar fascia arises. He attributed this soreness to his heavy boots, and the uneven surfaces he trod upon; but, as the tenderness increased, and progression was retarded, he consulted a surgeon, who pronounced the disease to be gonorrhœal rheumatism, and recommended him to take iodide of potassium with cinchona, and afterwards tonics with the alkaline carbonates, and an occasional alterative pill. He persevered with these means for some weeks; but, continuing to get worse, he determined to give up his business, and placed himself under my care.

I first saw him in July 1856. He was confined to his bed, and called my attention particularly to the state of his feet, the right one more especially; and he casually told me he had *had* a clap, and that there still remained a little discharge. I carefully examined the penis. There was no external swelling, no enlargement or thickening which would mark the site of an internal chancre, nor, as far as I could stretch the lips of the urethra, was there any sore visible. He had not had sore-throat nor enlargement of the inguinal glands, nor any external secondary symptoms. I came to the conclusion that he had chronic urethritis, the result of a gonorrhœa, and rheumatism of the deep fascia of the feet in connection with that disease. About two months from the beginning, he noticed the discharge was rather bloody, and remembers to have seen the recurrence of bloody discharge after using an astringent injection. I gave him Plummer's pill every night, and iodide of potassium. He continued the use of the iodide, cinchona being added, till the last week in August, when, finding no improvement, and some impatience on his part, and some anxiety on the part of his friends, I advised him to see a consulting surgeon, and, if it should be agreed upon, that he should have a change to some sea-coast. His friends overruled him, and he saw a physician, who prescribed quinine, and he went to the Isle of Man. In three weeks, he returned, much the same as when he left, but in addition he noticed that the heel-bones were larger than they should be; he again saw the physician who had previously prescribed for him, and he was ordered to have the heels painted with iodine, and to take iodide of potassium. At length he consulted a surgeon, who judged from the history, the treatment, and the state of the feet, that the disease was probably syphilitic and not gonorrhœal. He was brought under the influence of mercury; blisters were applied alternately to the sides of the feet, and dressed with blue ointment. A mild caustic injection was used, and the iodide was given when the mercury was discontinued. He soon began to get better; the swelling of the heels gradually diminished, the pain in the soles of the feet subsided, and he said he felt to have more spring from his feet when he tried to walk. The soles remained very tender for some time, and he had chronic rheumatic pains in his shoulders and about the back and legs. He finally cleared off these pains by recourse to, and continuance with, nitric acid and bark.

This no doubt was a case of syphilis, which I must candidly confess I had regarded as one of gonorrhœa. The enlargement of the bones would, you might say, have been a sufficient indication; but this condition showed itself only after the disease had existed for some time, and, had it been present at the beginning, it does not necessarily follow that the disease must have had its origin in syphilis. This condition is not even confined to cachectic states of the system, though, true, it is usually met with in such persons; and Fuller says, "a cachectic state does not seem to be a condition essential to its development." After the subsidence of the disease in the periosteal covering, the patient had general chronic rheumatism, and this reminds me to remark that when a chronic rheumatic case is presented to us, there are two diseases which it is worth while always to dispose of by inquiry into the history, and by examination of the urine, viz., constitutional syphilis on the one hand, and granular degeneration of the kidney on the other—two very common causes of the disease.

Though iodide of potassium was given in full doses, and continued over a lengthened period, there was no amendment; but directly the system was brought under mercury, the iodide became very valuable, and did very much towards facilitating the cure. Secondary symptoms were delayed, and he had never had mercury given to salivation; but, in other cases, I have had some remarkable instances where patients have been salivated, and afterwards tertiary symptoms (the lepra and psoriasis particularly) and rheumatism have succumbed to the iodide, *only* after the readministration of mercury.

When the secondary symptoms occur within six or eight weeks, the eruption is very commonly papular, and with this iritis is peculiarly associated, and synovial rheumatism occasionally accompanies syphilitic lichen. I am inclined to regard syphilitic iritis as rheumatism. The iris being a muscular structure, covered with a serous membrane, is as liable to become affected as the synovial membranes of the joints, which, as Brodie says, very much resemble the peritoneum. The most efficacious treatment is to get the patient under mercury as speedily as possible, to keep up gentle salivation for some time, and afterwards to administer iodide of potassium. The joints often remain chronically affected, and require liniments, blisters, and other forms of local treatment. Donovan's solution, the bichloride, nitric acid, and sarsaparilla may also be tried in succession; indeed, in these chronic cases, it is advisable and advantageous to change and vary the remedies repeatedly.

OBSERVATIONS ON THE TREATMENT OF ASTHMA.

By T. L. Pridham, Esq., Surgeon, Bideford, North Devon.

Much has been written of late on the symptoms and treatment of asthma—perhaps the most painful and apparently alarming disease to which human flesh is heir.

The observations which I have to make on the disease are based on the experience of nearly one hundred cases which have come under my medical care. I may not throw much new light on the subject; yet I am desirous to record the result of my experience and my treatment, as well as my observations on the peculiarities of this most distressing complaint, in the hope that some little may be added to the stock of information which has already been collected on the subject.

It is now many years since a deep rooted impression was made on my mind, by that memorable man, Abernethy, "that in order to treat disease, whether of a local or constitutional character, it was absolutely necessary to keep the stomach in that state, so that the food which was taken into it should be properly digested, in order to secure good blood, and consequently healthy secretions and healthy action of the body generally; and that in proportion as the surgeon or the physician attended to these particulars, so in proportion would the means placed within the reach of the practitioner be more or less successful".

With these impressions, which I believe to be most useful to the medical man, I started in my profession. I had not been long in practice when a severe case of what was called humid asthma presented itself for my treatment. I found that it had been of many years standing, and frequently seemed, from its violence, to threaten the life of the patient. The attack, however, would subside after a copious expectoration

had been thrown off from the lungs; the man at the same time becoming almost exhausted for want of nourishment, which he was not for a time able to take, except in the smallest quantities. After the lapse of a few weeks, the man would rally, eat and drink largely, and go about his work until another paroxysm threatened, when I was again in attendance. On each occasion of an attack, I used to say, "This surely will be the last"; so severe and imminent did it appear.

This state of things went on for some time, till at last the thought occurred to me, How is it that asthmatic patients generally live to a good old age? They do not die of consumption; nor do the lungs undergo any other change except the dilatation of the air-cells, which dilatation of the cells does not much interfere with their normal action when free from an attack. Thus considering the matter, it appeared to me probable that the original cause of the disease was in the overworked powers of digestion; and I was borne out in this supposition by the circumstance that the patient had respite from attacks as soon as a certain amount of expectoration had been thrown off, and his stomach had for a season rested. Was it not then probable that impurities in the blood were formed by imperfect digestion, which were thrown off by means of the lungs? How far my ideas were correct, the following statement of treatment will, I think, go far to prove.

I speak now of what is called *dyspeptic asthma*—a disease which I believe to be peculiarly hereditary; that is to say, when the disease has once made its appearance, those who inherit it will ever be liable to attacks from imprudent diet; for I am convinced that an asthmatic person can never with impunity eat and drink as other people do. I may here state that, out of the number of cases which I have attended, I found hereditary predisposition in nine out of ten. And if it be true that asthma is an hereditary disease, I will endeavour, by the evidence of cases which I intend to publish, to shew that wherever it has existed in any member of a family for one, two, or even three generations back, exciting causes, such as imprudent diet, an attack of bronchitis, an attack of influenza, derangement of the liver or any other functional derangement, atmospheric influences, peculiar odours, influences of the mind either for joy or sorrow, may at any time or period of life bring to light this peculiar disease, which has hitherto been latent in the system. It is fortunate that stomach-derangement from imprudent diet, etc., is, as far as my experience goes, the most frequent exciting cause—consequently more under the control of medical treatment, provided the patient has resolution enough to second the efforts of the medical attendant in carrying out a strict system of diet and regularity; in fact, it may be said that the scales are thus held with disease and suffering on one side, and comparative health and comfort on the other.

Most of the other patients inherited gout, and in some instances both diseases were traced in the family; and in more than one instance where this was apparent, I found that there were alternate attacks of asthma and gout, which is, I think, an additional evidence that both diseases are hereditary, and may be considered blood-diseases. What the peculiar element in the blood may be which produces either asthma or gout, it is to be hoped scientific researches may one day decide.

To return to my first case. The man in question, possessing some good sense, although he gave himself to beer-drinking and gross eating, as he said, to get up his strength after an attack, after having heard my views of his case, replied, "Well, sir, your remarks appear reasonable enough; and I will endeavour to follow your advice, and not eat and drink so much." I wrote down a system of dietary and general management, which for a season he followed with advantage; after this, he became tired of the plan, and again fell into intemperate habits, with an increase, if possible, of all his original fearful sufferings. He at last became reduced in circumstances, and was obliged to apply for parochial aid. I thought I had now a good opportunity of trying the effects of diet with medical treatment on this patient, and I persuaded him to go into the union house. There I took good care that he should not deviate from my prescribed treatment; for I placed him under *lock and key*, ordering his food to be regularly given to him, whilst he had a trustworthy attendant when he left his room for the purpose of air or exercise.

His appearance and symptoms at this time were as follows:—His countenance bore the signs of great distress. His shoulders were elevated; the eyes protruded; he had no appetite; the stomach was greatly distended after eating; pulse 70, feeble, yet regular; the tongue was coated, with fissures in it. There was great emaciation, and inability to lie down in bed or to walk up an ascent. The secretions from the bowels were dark. The urine was loaded, shewing an acid deposit.

After giving the patient an alterative pill and a saline aperient, I ordered him the following diet, which was to be regularly weighed out to him, and the hours of meals most strictly attended to. Breakfast at eight o'clock—half a pint of green tea or coffee, with a little cream, two ounces of dry stale bread; dinner at one o'clock—two ounces of fresh beef or mutton without fat or skin, two ounces of stale dry bread or well boiled rice; three hours after dinner, half a pint of weak brandy and water, or toast-water *ad libitum*; supper at seven o'clock—two ounces of meat, with two ounces of dry bread. He was not allowed to drink within one hour of his dinner or supper, or till three hours after; at other times, he was not limited. Open air exercise was ordered to be taken as soon as the office of digestion had been performed, but short of fatigue. In addition to this, I ordered him three grains of the extract of conium four times a day, at the hours of seven, twelve, five, and ten; the dose to be gradually increased to five grains four times a day. Under this treatment, in a few days the whole of his distressing symptoms subsided. At the end of a month, he was allowed three ounces of meat twice a day. At the end of two months, he had gained flesh and strength, so that he was able to follow his occupation as a carpenter, which he continued to do without intermission for some years, adhering strictly to the rules laid down for him, which he had now the good sense to adopt.

My views with regard to treatment in the case were simply these: not to give the stomach more to do than it could well accomplish; not to dilute the gastric juices by fluids before or soon after eating, but to allow them to perform alone their proper functions; and to quiet the nerves of the stomach by means of a mild sedative, which prepared it for the due performance of the office of digestion. By this plan, the stomach soon began to crave for food, and a longing for the hour for taking nourishment appeared—good evidence that the powers of digestion were recovering.

Is it not reasonable, then, to suppose that a moderate quantity of food, well digested, supplies the system with more pure and nutritious blood than a large quantity of ill digested food can possibly do? It appears to me not unreasonable that the poison, as it may be called, which is generated by food ill assimilated, finds its way into the circulation; and hence arises the misery of hereditary asthma, which nothing but a paroxysm, and generally a copious expectoration, will relieve. It is my intention in my next paper to give further evidence of the beneficial results of the sedative treatment of *dyspeptic* asthma.

[*To be continued.*]

ON THE EPIDEMIC SMALL-POX IN OXFORD IN 1854-5.

By E. L. HUSSEY, Surgeon to the Radcliffe Infirmary, Oxford, and Stationary Vaccinator of the National Vaccine Establishment.

BEFORE the epidemic cholera appeared in Oxford in 1854, several cases of small-pox had occurred; and while the cholera was still raging, and after its ravages were at an end, small-pox spread in the city and neighbourhood more widely than on any former occasion,—at least of late years. (For notice of small-pox in 1844-5, see Mr. W. P. Ormerod, *On the Sanatory Condition of Oxford*, 1848, p. 33.) Scarlatina, in a severe form, was also extensively prevalent at the same time, and there were many fatal cases. Fever of a low type was also prevalent, and in many cases fatal; measles and hooping-cough were also epidemic.

The late Dr. Ogle (at that time Regius Professor of Physic in the university) wished that some record should be made of the prevalence and severity of the small-pox, and of the circumstances incident to its occurrence; and he purposed to draw up a statistical report of the cases. Not being satisfied with his efforts, he gave over to me the few notes he had collected.

NUMBER OF CASES. The resident medical practitioners formed a general estimate, that more than 4000 persons were attacked with the disease in different degrees of severity. The population at that time was probably more than 27,000, and it was thought that one person in every six was attacked.

The population in August and September 1854 has been estimated at 26,474 (*Memoir on the Cholera at Oxford* in 1854,

by Dr. Acland, p. 29). The "average of seven Novembers", ending 1850, is said to be 27,012 (*Report of the Evidence into the State of the Sewerage, etc., of Oxford*, 1851, evidence of Mr. Allen, p. 53). In December 1850, the number is estimated at 27,443 (*Monthly Report on the Mortality and Public Health of Oxford*, annual series iii, by Dr. Greenhill and Mr. Allen).

Of this large number of cases, it was hardly to be expected that accurate notes should have been kept, at a time when such a heavy demand was made upon the services of the medical profession during the prevalence of the other acute diseases then affecting the inhabitants.

At the medical dispensary, 173 cases were entered on the books, upon recommendations of subscribers. But the medical officer (the late Mr. Wood) told me that in many houses where he was visiting he found other members of the family ill, and that he attended them without entering their names on the books of the dispensary. On the whole, he thought he attended 300 cases. Two of the number had the disease for the second time; Mr. Wood himself attended them in the former attack.

Mr. Hansard has kept accurate notes of thirty-seven cases among the soldiers of the militia and the recruiting parties stationed here. The greater part of these were admitted into one of the buildings in the yard of the Radcliffe Infirmary, which had been hastily fitted up to receive them. He adds, "There were about thirty other cases in the regiment, but so mild that the febrile symptoms and half a dozen spots were all the indications of the disease. No particular record was taken of them, because they were not sent to hospital."

In the Radcliffe Infirmary, 62 cases came under observation; 27 patients were admitted with the disease upon them—26 from the town, and 1 from Garsington, a village about six miles off; —all of these recovered. 31 patients, admitted with other diseases, were attacked; 3 of the nurses caught it, and one of the resident officers. Of the patients in the house, in whom the disease appeared after admission, 3 had not recovered from the small-pox at the time of their death:—

A married woman, aged 34, with fistulous ulcerations about the lower bowel, and other symptoms of unhealthy constitution, was attacked with confluent small-pox, and died after seven days illness.

A butcher, aged 61, was admitted with mortification of the foot. The leg had rotted off nearly as high as the knee, when he was attacked with confluent small-pox, and died on the 19th day.

A married woman, aged 40, with some functional disease of the female system, was attacked with confluent small-pox, and died in about three weeks.

These three patients all exhibited on the arm the cicatrix of former vaccination; it is believed they had not been re-vaccinated.

One medical practitioner caught the disease, the wife of another, and several children in the family of a third,—all in a mild form.

DURATION OF THE EPIDEMIC. The first case, of which I have any note, was in the parish of St. Ebbe's, in a girl three years old, the child of a stranger resting in the town,—admitted a patient of the dispensary on the 17th of July, 1854.

The last case, also in a patient of the dispensary, was in St. Thomas's parish, in a man aged 25, admitted a patient on the 11th of April, 1855.

NUMBER OF DEATHS. In the *Quarterly Returns* published by the Registrar-General it is said that, among the deaths in Oxford, 80 cases of small-pox had been registered in the last five months of 1854 (*Quarterly Return*, 1854, No. 24, p. 37), and 25 in the first quarter of 1855 (*Quarterly Return*, 1855, No. 25, p. 25). But this probably does not include the deaths in the whole district popularly known as forming "Oxford".

For notes of 32 fatal cases, I am indebted to the practitioners under whose care they fell. Of these 32 patients, 24 had never been vaccinated; 4 "probably not", at least there is not any reason to believe that they had been; 4 presented marks of vaccination:—

A young gentleman, aged 17, in St. Mary the Virgin's, died under a severe attack of confluent small-pox. He had been vaccinated in childhood, but not revaccinated.

A brewer's man, aged about 50, in Jericho, was revaccinated; four days after the operation, he was attacked with confluent small-pox, and died in three days.

A girl, aged 21 months, the child of a tramp staying in Jericho, had a single cicatrix on the arm—a doubtful sign at best of the previous vaccine disease.

A baby, aged 2 months, one of a delicate and sickly family in St. Ebbe's. The attack is described as "modified"; an elder sister had it at the same time. In the baby, the vaccine disease had not passed through the regular course, and the only vestige of it was one small mark.

Late one evening, a physician was summoned to a commercial traveller staying at an inn. The general symptoms of small-pox were sufficiently clear, and the characteristic eruption was visible on some parts, though not on the face; his arm presented a good vaccine cicatrix. The patient was in a state of great alarm, saying if it was small-pox, he was sure he should die. The next morning he left the town, travelling by railway. It was afterwards learned that he went to his home in the neighbourhood of London, and died there. No other particulars are known.

The mortality was almost confined to the poor, and among them chiefly were observed the virulent after-effects of the pestilence.

Generally speaking, the disease was mild in those who exhibited clear marks of former vaccination; there were some few severe cases among such, but not many.

CAUSES OF THE EPIDEMIC. It is not necessary to seek far for the exciting cause of a disease so highly contagious. Possibly, it did not arise from a single case only.

A large town is seldom free for any great length of time from cases scattered here and there among the inhabitants and visitors; London is never free. To danger from such a source we are always liable; but among a population protected by vaccination, or by a former attack of small-pox, the imported contagion soon dies out. It only spreads when the mass of the unprotected swells to such an amount that the disease passes readily from one to another, the unsecured population being ready to receive the infection.

A predisposing cause of so severe a visitation may perhaps be found in the habitual neglect of vaccination among the poor, even more than in the imperfect manner in which the vaccination is thought to have been done. Dr. Ogle often expressed his opinion among his professional friends, that much of the vaccination formerly performed in the town had been done without proper care, and without due supervision of its effects.

However few the facts which are here brought together, yet being of local interest, they are perhaps of sufficient value to be recorded by this Society.* At the late period of the epidemic at which the attempt was made to collect them, it was not found practicable to obtain materials for a complete account of the visitation. Such as they are, they have been put into their present shape in the hope that they will not be thought unworthy of the attention of the members of the Society.

For various notes of cases furnished to Dr. Ogle or to myself, my thanks are due to my colleagues, the physicians and surgeons of the infirmary, Dr. Jackson, Dr. Acland, Mr. Hester, Mr. Hansard, and Mr. Symonds, Mr. Briscoe (then house surgeon to the Infirmary), Mr. Coar, Mr. Freeborn, Dr. Giles, Mr. Godfrey, Dr. Leapingwell, Mr. Owen, Mr. Rusher, Mr. Taunton, Mr. Vincent, and Mr. Wood.

Transactions of Branches.

BATH AND BRISTOL BRANCH.

THE HYPODERMIC ACTION OF MORPHIA.

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[*Read April 26th*, 1860.]

I BRING the subject of the hypodermic action of morphia before the Society this evening, in order to elicit the experience of those gentlemen who are conversant with that practice. My own experience is very small, and embraces only four cases; and these cases illustrate the palliative agency of morphia solely in neuralgic disorder.

I do not know who first devised the hypodermic plan of administering remedies; but to Dr. Alexander Wood, of Edinburgh, we are indebted for introducing that plan into general

* This paper was read before the Ashmolean Society of Oxford; and though perhaps it may be thought too imperfect for professional literature, it is the only record which has been kept of the visitation.

notice. His mode was to inject the narcotic into the tender spots of neuralgic tissue, wherever that might be: the belief of Dr. Wood being that the localisation of the remedy in the affected part is necessary to its good effect.

Mr. Hunter, late of St. George's Hospital, has made some important observations on this subject. He found that frequent repetition of the injection in the same spot produced abscess, and he therefore employed the hypodermic injection in other parts, and with the same palliative or curative results.

From experiments made by Mr. Hunter and others, it has been demonstrated that hypodermic injections act more quickly than stomachic doses; that they produce a more powerful and more effective result; and that frequently the hypodermic injection is productive of the greatest benefit, while an equivalent dose administered by the stomach is entirely useless, and even prejudicial.

The following is an outline of the four cases of neuralgia, in which I administered a solution of the acetate of morphia in the hypodermic method.

CASE I. A female, aged about 35, of spare and delicate habit, came first under my care in 1857, for acute rheumatism; subsequently, for hemicrania and other quasi-rheumatic pains; and lately, for sharp and persistent pain in the inframaxillary nerve of the left side. I need not enumerate the various devices, local and constitutional, which were resorted to; suffice it to say, that they gave scarcely any relief, even for a few hours. At length, I determined to inject some morphia under the skin, and first gave, according to this plan, ten drops of the Pharmacopœial solution of acetate of morphia. This caused sound sleep for two or three hours, which was followed by considerable remission of suffering. On the next occasion, I injected fifteen drops of the Pharmacopœial solution, and afterwards increased it, dose by dose, to twenty-two drops, which was the quantity introduced last Friday evening. The ultimate effect now resulting is complete relief from pain for about three days, and it then returns with less intensity than before. There are particular circumstances about this case which render it unlikely that the neuralgic disorder will ever be cured; but it is noticeable that whenever morphia was given by the mouth, no appreciable effect on the pain was ever produced.

CASE II. The second case was that of a lady, aged about 50, who had for many years past suffered from paroxysmal attacks of neuralgia in the upper maxillary nerve, especially in the spring and autumn. All that I had been able to do, when consulted by this patient on several occasions, was to bring about a gradual removal of the pain by iron and quinine, and thus to alter the condition of blood on which the disease might be supposed to depend. She was always an anæmic subject; and, furthermore, often had her sleep disturbed by being obliged to wait on a sick husband. About a month ago, I was sent for to see her one evening during an intense neuralgic attack. I took my apparatus with me, and injected at once fifteen drops of the officinal solution of the acetate of morphia. Next day, I found that the operation had been followed by sleep for six hours, with almost complete relief from pain; the only complaint now made being some amount of soreness over the course of the affected nerve. Complete recovery took place; and it is to be remarked that in this case the administration of narcotics in the ordinary way had only stupified the sensorium, without in any way reducing the local hyperæsthesia.

CASE III. My third case occurred in Dispensary practice, and was a poor middle-aged woman, who is suffering from apparently malignant disease of the orbit. The eye-ball is pushed forward, the left side of the frontal bone is raised, and the malar bone of the same side is protruded downwards and outwards. The pain is often of an excruciating kind, and had scarcely at all been alleviated by enormous doses of opium. It was obvious that the utmost that therapeutics of any sort could do must be of a bare palliative kind; but I injected one day fifteen drops of solution of acetate of morphia, with considerable relief, though at the expense of such severe sickness, that I was not allowed to repeat the process. The pain, of course, soon returned, and there does not seem anything further to be done.

CASE IV. A few days ago I injected ten drops of the solution of acetate of morphia into the areolar tissue of an elderly gentleman who has long suffered from subacute neuralgic disorder, attributable to suppressed gout. The result was an agreeable determination to the skin, and a generally soothed state of the nervous system.

The region which I have always selected for the injection of the solution is the areolar tissue of the upper arm; but the posterior part of the neck would probably answer equally well. Mr. Hunter has described the injecting instrument, and the mode of using it. It consists of a glass barrel, with a pipe made of silver, which screws on and off the barrel at pleasure: the end of the pipe being sharpened like a needle, and perforated on one side by an oblique opening, through which the drops of the solution are expelled. Having charged the syringe with the narcotic fluid, hold it in the right hand at the junction of the barrel with the pipe, and with the left hand take up, between the finger and thumb, a fold of the skin of the patient: having made it tense, let the point of the syringe be passed through it with a quick steady movement, and sufficiently deep that the point can be distinctly felt under the finger. The piston must now be pressed very slowly down with the thumb of the right hand, and the escape of the fluid into the areolar tissue will be indicated by a circumscribed elevation of the epidermis. After the instrument is withdrawn, a small strip of plaister should be placed over the aperture caused by the needle.

According to the best authorities, we should never use more than half the ordinary stomachic dose for males, nor more than one-third for females. The specific action of any medicine is developed with much greater certainty when it is introduced hypodermically, chiefly because the whole quantity of a substance given in this way is absorbed, without being submitted to the dynamic influences of the gastric and intestinal secretions.*

I regret to say that *intense sickness* is a frequent and troublesome sequel of the hypodermic injection of morphia. In three of the cases above related, this symptom was very severe, and in some measure obliterated the sense of relief otherwise obtained. In one instance, a temporary cutaneous eruption, like urticaria, was also noticed.

A due discrimination of cases ought to be made for this plan of treatment. To practise it in every example of neuralgia would be unwise and useless; for nerve-disorder often depends upon such trivial causes as an error of digestion or over-fatigue, and vanishes spontaneously when the exciting agent is removed. The cases in which success can most probably be hoped for are those in which the system has been long worn by pain, and in which a general spanæmic condition exists. The administration of morphia in the hypodermic method appears then to act as a narcotic shock, which powerfully and almost instantaneously soothes the whole nervous system, and destroys the local hyperæsthesia. Sometimes this result is permanent, sometimes not, according to the permanent or temporary agency of the causes of the disorder. But however short the interval of ease, it ought to be very welcome; for I believe that the great hindrance to our successful treatment of neuralgia has been our obstinate theorising about its etiology. While we are busy in classifying our supposed *materies morbi* (no classical phrase has ever exercised so complete a tyranny over us), and are applying our chemical and dynamical drugs accordingly, we are apt to forget the simple clinical fact that a human being lies in agony by our side, and supplicates relief for that one symptom—*pain*. Let us, if we can, first utterly overwhelm and abolish this pain; perhaps it will never return; but at all events, when our patient is in a grateful stupor, there will be time to philosophise about the origin of the malady which we are called upon to subdue.

It must be admitted that there are certain trifling practical difficulties in the way of the hypodermic administration of medicines. The introduction of a pointed instrument under the flesh causes a momentary pang, which cannot be evaded. We may liken this pang (as we can with perfect truth) to the prick of an ordinary needle; but the infliction of a punctured wound even of this simple kind may be a terror to children, and to nervous adults of both sexes.

That in a multitude of counsellors there is wisdom is not more true than that in a multitude of testimonies there is safety. There are few of us who like to try a new remedy in desperate disease, or in a troublesome disorder, unless the virtues of that remedy have been authenticated by many impartial witnesses. It is only from a hope that I may in a slight degree help to establish the claims of the hypodermic administration of morphia to the confidence of the profession, that I have ventured to occupy the time of the Society this evening.

* To show the caution which it is necessary to observe, I may state that a little while ago I injected one twenty-fourth of a grain of sulphate of atropia into the areolar tissue of a person suffering from neuralgia. In two hours afterwards, I was summoned in great haste, and found that I had to combat, *secundum artem*, rather aggravated symptoms of belladonna poisoning.

Progress of Medical Science:

AT HOME AND ABROAD.

ANATOMY AND PHYSIOLOGY.

THE REPRODUCTION OF BONE.

Having in the Journal for May 26th, related the experiments of M. Ollier on the formation of bone by the transplantation of periosteum, we will now give an account of his researches on the

REGENERATION OF BONE AFTER EXTIRPATION AND RESECTION.

That bone can be reproduced after removal, if care be taken to preserve the periosteum, is by no means a new fact; and the knowledge of it has already found its practical application in surgery. From a series of papers by M. Ollier in the *Gazette Hebdomadaire de Médecine et de Chirurgie* for 1858, we have gathered the following historical information.

Historical Outline. Weidmann, in an essay on necrosis, published at Frankfort in 1792, fully recognised the importance of the periosteum for osseous repair. Previously to this period, the physiology and pathology of the osseous system had been the subject of various theories by Duhamel, Haller, Dehtleef, Bordenave, Troja, Tenon, Blumenbach, etc.; and their conclusions, in whatever direction, have since undergone little modification. Weidmann appears however, according to M. Ollier, to have epitomised the literature of the subject, and to have laid down very distinctly the conditions under which osseous tissue can be reproduced, in the following words.

"Ut succrescat novum os, opus est, ut periosteum vel quæ aliæ nutriendis ossibus inserviunt membranæ, illæsæ supersint; etenim in longis ossibus, in quibus, obortâ tubi totius necrosi, periosteum inflammatione vel alio modo destructum est, novi ossis regeneratio deficere videtur."

Resection being rare in the days of Weidmann, he principally studied the regeneration of bone after necrosis. He speaks, however, of a case of resection of the shaft of the tibia by Justamond of London, in which there was no reproduction of bone; and he believes that this could only be attributed to the destruction of the periosteum during the operation.

Within the first thirty years after Weidmann, the function of the periosteum was studied by Scarpa, Léveillé, Charmeil, Béclard, Cruveilhier, etc.; but principally in reference to the formation of callus. Resection in the meantime became frequent: yet surgeons do not appear to have troubled themselves much about the renewal of the bone, while this was an object of great care to them in operations for necrosis. In 1832, Heine of Wurzburg performed some experiments on dogs, which showed that the periosteum was the organ principally concerned in the reproduction of bone; and, in a few years, several cases were published in Germany and Russia, in which the ribs and the radius had grown again after removal, care having been taken to preserve the periosteum. In France, the importance of preserving this membrane was pointed out by Malgaigne in 1834, by Velpeau in 1839, by Blandin in 1846, and in Germany and Great Britain by Klencke, Syme, Steilin, Albrecht Wagner, etc. M. Larghi, of Verceil in Piedmont, has from the year 1845 performed a number of resections (sometimes of the boldest operative character) with the object of preserving the periosteum, and thereby bringing about the renewal of the bone. To M. Larghi, M. Ollier ascribes the merit, of not having been the first to point out the idea of preserving the periosteum in cases of resection, but of having given the most numerous demonstrations of its ease and practicability. Professor Langenbeck, however, claims to have performed subperiosteal resection of the ulna, followed by perfect renewal of the bone, in 1843; and to have subsequently become convinced, by the results of a large number of analogous operations, that, by preserving the periosteum, a reproduction of bone may be expected. Operations of this kind have also been performed by Baudens, Chassaignac, A. Richard, Barrier, and Nélaton, in France, and by Borelli of Turin.

The valuable memoir of Dr. Albrecht Wagner, *On the Process of Repair after Resection and Extirpation of Bones*, has, as many of our readers must be aware, been translated into English, and published by the New Sydenham Society. We would recommend the perusal of this memoir in connection with our account of M. Ollier's papers.

From this brief historical sketch, we return to the researches of M. Ollier, leaving to a future occasion some account of the surgical details which have been given by those who have availed themselves in operating of the osteogenetic properties of the periosteum.

General Character of Experiments. M. Ollier performed experiments on the same bones on the two sides of an animal, so that the conditions might be the same. The bones on which he principally operated were the radius and some of the metatarsals; because, by choosing these, the remaining bones allowed the preservation of the form of the limbs, and a sufficient amount of motion. When the periosteum was preserved, new bone was formed at the end of six weeks or two months, in the place of that which had been removed; but when the periosteum was destroyed, the removed bone was replaced only by a fibrous cord, perhaps interspersed by a few osseous nuclei, evidently due to the fact of some portions of periosteum having been left in the operation. These were the results of the first experiments: subsequently, M. Ollier divided his experiments into four classes; viz.: *a*. Those in which the periosteal tube was carefully preserved; *b*. Those in which the bone was removed, and some patches of periosteum were left; *c*. Those in which the whole of the periosteum was removed, care being taken to preserve the cellulo-muscular envelope immediately surrounding it; *d*. Those in which, in addition to the periosteum, a layer of the tendons and muscles attached to it was also removed.

In the first class of cases, the bone was entirely reproduced, and assumed almost the form and proportions of that which had been removed.

In the second class, osseous nuclei or patches were found, corresponding exactly to the pieces of periosteum which had been left.

In the third class, M. Ollier found a fibrous cord, presenting in certain cases some hard semi-ossified granules, corresponding in general to the ends of the bone (the radius), where the tendons and ligaments had been carefully separated from the bone, but where there is not a distinct periosteum.

In the fourth class, there was no reproduction of bone, beyond the enlargement or pointed ending of the bone which had been operated on.

These experiments, M. Ollier observes, shew plainly that the ossific function of the periosteum cannot be supplied by the tissues surrounding it. Whatever may be the histological connections of the periosteum and cellular tissue, however frequently pathological ossification may occur in the latter, they cannot be admitted to supply the place of each other. When the periosteum is removed, the subperiosteal blastema is removed with it. And yet, in the place where the resection has been performed, there must be a mixed exudation, furnished by the medulla, the periosteum, and the tissue itself of the end of the bone which is left; and this sometimes complicates the problem when a small portion of bone has been removed. But when entire bones or large pieces of bone are taken away, the blastema proceeding from all the sources just now mentioned is not sufficient to supply the place of that which would be furnished by the periosteum that has been removed.

The presence of osseous nuclei in the course of the fibrous cord is no evidence that the cellular tissue covering the periosteum furnishes any ossifiable exudation. It is difficult, in some parts, to remove the whole of the periosteum. Moreover, the ends of the tendons, in spite of their defective vascularity, probably have more share in the formation of bone. It must not be forgotten that cartilage-cells are always found in the tissue of the ends of some tendons, as the tendo Achillis; and that sometimes these are the starting-points of pathological ossification. In young animals, as the calf, there are numerous embryonic elements between the tendinous fibres near, and especially on the limits of the bones.

As causes of error and of complication in the experiments, M. Ollier notices the drawing together of the ends of the cut bone by muscular contraction; the enlargement (as from inflammation) and consequent elongation of the ends of the bone; and the modifications which necessarily arise in the process of normal growth in a young animal.

Resection and Extirpation of Long Bones. The periosteum of rabbits is easily detached; and it is often more easy in them to perform subperiosteal resection than to remove the membrane with the bone. M. Ollier denuded the radii of rabbits in a linear direction along the interosseous membrane, and has removed sometimes the whole bone, sometimes

the greatest part, sometimes only a portion of the shaft. The partial resections were performed either so as to include the nutritive foramen, or below it; but no general difference in the result could be detected.

In complete removal, the radius was reproduced if the periosteum was preserved. A rabbit, seven months old, was operated on on August 26th. There was no suppuration; but the animal soon became emaciated, and remained in ill health until it was killed on November 16th—about eleven weeks after the operation. M. Ollier found a new bone, as long as the radius; it was, however, scarcely one-fourth as thick as the bone removed, and was irregular, and adhered at several points to the ulna. The lower end of the reproduced bone was marked by furrows corresponding with the course of tendons. The reproduction was here certainly affected by the health of the animal. On the same day, a similar operation was performed on another rabbit of the same age; but no bone was reproduced.

In another rabbit, M. Ollier removed the two radii at an interval of three days, leaving the lower epiphyses. A month later, on the side where the periosteum had been left, there was a new bone as long as the radius, about one-tenth of an inch in thickness, and adhering to the ulna in nearly its whole length. On the other side, where the periosteum had been removed, there was no trace of reproduction.

The result was different when the shaft alone was removed. On August 26th, M. Ollier removed four-fifths of an inch of the radius on each side of a rabbit, preserving the periosteum on the left, but removing it on the right, taking care, however, to preserve the cellulo-muscular sheath. On November 12th—eleven weeks after the operation—the animal being then five months and a half old, it was killed. On the left side, the bone was reproduced in such a way as not to leave it evident that there had been a loss of substance. The new bone adhered to the ulna at several points. On the right side, there was no reproduction; the cut ends of the bone were united to the ulna, and there was no connexion between them. This latter circumstance was observed by M. Ollier in all his cases of resection, except where continuity was kept up by small fragments of periosteum left in the wound.

The reproduced portions of shaft are at first irregular; but in time they assume the form and dimension of the normal bone. At the commencement, they are generally marked by a longitudinal furrow, corresponding to the incision in the periosteum. The new bone is at first solid; but vacuoles soon begin to be formed, which unite and constitute a medullary canal.

In one case, M. Ollier found the bone enlarged, and presenting a hole, from which protruded a vascular mass connected with the medulla. There had been suppuration in the wound; and perhaps there was a small sequestrum in the bone, which would at some time escape by the opening mentioned.

Similar results to those of the operations on the radius were obtained by M. Ollier from more numerous experiments on the metatarsal bones.

In order to demonstrate the action of the periosteum on the same bone, M. Ollier removed first the lower half with the periosteum; then the upper half, preserving the membrane. At the end of six weeks, the upper half was reproduced, while the place of the latter was occupied by a fibrous cord.

The reproduction of bones is then less perfect and less complete after their entire removal, than when a portion has been left. A radius of which rather less than an inch has been removed is perfectly restored in three or four months; but this time is insufficient for the reproduction of a bone that has been entirely extirpated. In the latter case, the new bone is thin, misshapen, and unequal; but M. Ollier has always found it sufficient for the maintenance of the form and functions of the limb.

The medulla and the osseous substance, M. Ollier observes, cannot be regarded as inactive in the process of the formation of bone. When a portion of the shaft of a long bone is cut out, the medullary canal becomes closed, and the compact substance at last takes part in the work of repair at the limits of the section, as may be especially seen when traumatic inflammation has been produced. Here a process of repair takes place, which cannot be entirely attributed to the periosteal exudation. When a bone is rasped, so as to remove, with the periosteum, a portion of the shaft without penetrating the medullary canal, a reparative work occurs, which can only be attributed to the osseous substance itself. The process is slow and incomplete; but it cannot be overlooked. And there is nothing surprising in its occurrence, if all the conditions of the nutrition of bone are considered. Around the vessels contained in the Haversian canals, there is a continual formation of osseous corpuscles. On the internal surface of these canals are embryonic elements analogous to those which are formed beneath the periosteum; and it is by their successive organisation that the concentric layers are formed. The ossification here goes on as under the periosteum, without the intervention of cartilage. There is, then, nothing surprising in the circumstance that, when a solution of continuity occurs, these deposits of blastema should increase like those of the periosteum, and thus contribute to the repair of the bone. The hardness and consistency of the bone, indeed, render the phenomenon obscure and slow; but the enlargement undergone by the resected ends in certain cases is not produced by the subperiosteal deposit alone.

Resection of Flat Bones and Short Bones. M. Ollier has performed experiments on the scapulæ of rabbits. In one case, he removed a portion, partly cartilaginous and partly osseous, of the lower angle of the scapula of a rabbit three months old. The periosteum and perichondrium were preserved as much as possible. The animal was killed six weeks after the operation. In the place of the resected portion, there was a large piece, half osseous and half cartilaginous. The osseous part was lowest, and appeared to be the continuation of the border of the scapula. The cartilaginous part was continuous with the cartilaginous margin of the posterior border of the bone. The whole was about a quarter of an inch in thickness. The newly formed angle of the scapula formed a strongly marked angle with the axis of the bone, being drawn inwards by the muscles attached to it, probably during the early period of its formation, while it was yet soft. The loss of substance, however, was not entirely repaired. In front of the new piece, in the infraspinous fossa, where a thin piece of the compact substance which here forms the scapula had been removed, there was no reproduction; and there was left a perforation filled by a thin cellular layer. The cartilaginous part of the new piece was formed of true cartilage, presenting numerous large cavities containing multiple cells. On the limits of the ossified part, the arrangement of the cells into series was very distinct.

The absence of ossification in the cases noticed where a portion of the thin layer of compact tissue had been removed, is not peculiar to the scapula. In the cranium, repair is produced in great measure at the expense of the diploë; and where this substance is wanting, reproduction of the bone is effected with great difficulty (Heine).

In another case, M. Ollier removed the cartilage alone. It was almost entirely reproduced, although a sufficiently conspicuous notch was left at the point where there had been a loss of substance. There was not, as in the former case, a cartilaginous callus. Ossification proceeded towards the edge as an emanation from the original bone. The cartilaginous margin of the scapula ossified during the course of the experiment.

Among short bones, M. Ollier has removed the cuboid only. The periosteum was preserved as much as possible; but the dissection was difficult and irregular. At the end of five weeks a hard fibrous substance, but apparently not ossified, filled the place of the removed bone.

M. Ollier deduces from these latter experiments that the osteogenetic property of the periosteum does not reside in all bones alike. The facts relating to trephining the skull and the pelvis, related by Heine, support this view, which will have to be rendered more precise by experiment.

The phenomena noticed in the preceding experiments are similar to those obtained in the formation of bone by the transplantation of periosteum. The process of repair when a piece of bone has been removed presents the closest analogy with the production of callus; and, when there is no suppuration, the phenomena are quite similar. At first, a greater or less quantity of blood is effused into the periosteal sheath; it then becomes coagulated, loses its colour, and is absorbed. At the same time, there is an exudation of blastema, from which at first are formed free nuclei in an amorphous material. Cartilage-cells are soon developed; but, as soon as the cartilaginous deposit is invaded by calcareous matter, ossification goes on without the intervention of cartilage.

Reproduction of Joints. The experiments of Chaussier, Heine, Wagner, etc., have thrown great light on this subject. M. Ollier's experiments have been performed with the special view of observing what was the importance of the elements of the joint in its reproduction. He has especially removed the

ends of bones, leaving the periosteum continuous with the ligaments and the articular capsule. In this way, there has been left between the cut ends of the bones a continuous canal, formed in the centre by the cavity of the joint, and at each end by a portion of periosteum. The object was to find whether in such a case the motion of the joint would be preserved, or whether the exudations from the periosteum would form an osseous ankylosis. He has found that the exudations remain independent, and that a true joint is formed.

Six operations were performed by M. Ollier on the second metatarso-phalangeal joint: four by the method described, two by removing the whole of the joint. In order to prevent approximation of the ends of the bones, nearly half the metatarsal bone and a third of the phalanx were removed.

When the subperiosteal operation was performed, the heads of the bones were reproduced; the contiguous ends were independent, or at least they were only united by a loose cellular tissue, in the meshes of which the rudiments of a synovial membrane could be detected. In one case, the filaments were united towards the centre so as to form a kind of interarticular cartilage, as has already been observed, under certain circumstances, by Textor, Heine, and Wagner.

When the bones were removed in the ordinary way, the periosteum and capsule being taken away, there was no osseous reproduction, nor formation of an articular cavity. The bones were united by a fibrous band of greater or less thickness; and the toe was retracted more than where the periosteum had been preserved. It must be observed that, in the latter class of cases, the part reproduced does not equal in size that which has been removed, in consequence of the early retraction of the toe.

In resections under the capsule and periosteum, the capsule becomes thickened, and its opposed walls approach but do not become united. A kind of synovial cavity always exists; it is not single, but divided in different directions by fibro-cellular partitions. At the end of two months, M. Ollier found in one case two principal cavities, corresponding with the heads of the bones; they were bathed in a fluid analogous to synovia; no epithelium could be found in them. It must be observed, that the specimen was not examined until some days after death. It is probable that the persistence of the synovial membrane on the internal of the capsule prevents its obliteration. The sesamoid bones in the lower part of the capsule were doubled in size; and, in the cases of resection of the heads of the metatarsal bones with removal of the periosteum, the presence of these bones may lead to the belief that osseous repair has commenced.

The articular surfaces of the reproduced heads of the bones in M. Ollier's experiments were smooth, polished, reddish, and much harder than cartilage. Under the microscope, no true cartilage could be discovered, but a fibroid substance, in which ossification was more or less advanced.

Certain Conditions to be observed. For the reproduction of bone, M. Ollier observes, the periosteum must be healthy. This term, however, requires some explanation, which he accordingly furnishes. The membrane almost always loses more or less of its normal characters in cases of disease of bone; but the modifications which it then undergoes do not always amount to a loss of its essential properties. If it is simply thickened and vascular, or covered with healthy granulations, it should be preserved, and there will be reason to expect ossification. If it is fungous, it must be excised, or, still better, modified by means of the actual cautery. If it is disorganised in the course of necrosis, or invaded by malignant deposit, its preservation cannot, of course, be thought of.

Age has an important influence on the possibility of removing the periosteum, as well as on its osteogenetic power. In the fœtus, it is thick, vascular, and easily detached; in the old person, it is reduced to a fibrous layer, of unequal thickness, and very adherent to the bone in some parts. In the child aged from two or three years up to ten, it is very thick, and whitish, although richly supplied with vessels, as may be shewn by using a fine injection. It is then easily detached, even at the points where the adhesions to the bone are subsequently most firm. At this age, large bones may be entirely removed with ease from their periosteal sheaths: M. Ollier has several times removed the entire femur from the body of a child in the dissecting-room, without further injury to the periosteum and capsules of the joints than the simple long incision through which the bone was withdrawn.

As ossification advances, and the epiphyses become united to the shafts of the bones, the periosteum becomes relatively thinner, and contracts more intimate adhesions at the articular extremities and at the projections of the bones. The tendons and ligaments become solidly implanted in the osseous tissue; it is impossible to separate them otherwise than by cutting; but, by carefully scraping the bone, the integrity of the periosteal tube is in a measure preserved.

When once the epiphyses have become united, and the growth of the bones has ceased, the physiological importance of the periosteum appear to diminish. The anatomical characters also change, and render the operation of subperiosteal resection more difficult, so that, after the age of 30, it cannot be performed without more or less laceration of the periosteum, and even partial loss of this membrane. The periosteum at certain points, as under the triceps femoris and the brachialis anticus, becomes so thin that its very existence might be doubted. M. Ollier observes, that the thickness of the membrane varies in different subjects, in a manner which it is not easy to explain.

In all cases, however, and even under the most unfavourable circumstances, it is possible to preserve the greatest portion of the periosteum, especially round the shafts of bones. M. Ollier, then, regards the attempt to preserve the periosteum in cases of resection as a rational procedure.

Reviews and Notices.

Diseases of the Ear: their Nature, Diagnosis, and Treatment. By Joseph Toynbee, F.R.S. Pp. 422. London: John Churchill. 1860.

Mr. Toynbee, in his introduction to the volume before us, states an undoubted fact when he tells us that, before the publication of this work, we had no treatise specially devoted to diseases of the ear. Aural surgery has, indeed, been well illustrated; but the pathology of the ear has remained to be minutely described by our author. As a rule, general practitioners have made no intimate study of the lesions of the apparatus pertaining to the sense of hearing; and, when we consider the difficulties in the way of dissecting its bony cage, we are not surprised that the profession have paid less attention to this department of the body than to many others.

Mr. Toynbee tells us that, with the saw and cutting forceps, he has removed and dissected the petrous bones of no fewer than two thousand ears. He can, therefore, lay claim to a most intimate knowledge of the aural apparatus contained therein; and has a right to speak with authority with respect to its morbid appearances. We confess we are rather startled by the following case, related by the author, in reference to the uselessness of the auricle as a collector of sound.

"W. B., a sailor, aged 33. The whole of the upper portion of the left auricle (of the right ear) is absent. The antitragus remains, and also a portion of the tragus, about equal to it in size; below these, the remnant of the lobe slopes gradually down to the side of the neck. He states that his ear was bitten off by another sailor at one of the Navigator's Islands; but the state of the parts rather indicates a removal by some cutting instrument. The patient had come from California, where the practice existed of cutting off the right ear of a thief. He was anxious to return to California, but very unwilling to appear there without his right ear, and therefore applied to me to aid him in obtaining an artificial substitute. .... When examining the patient, I found that each meatus contained cerumen; after the removal of which by the syringe, he heard the watch equally well with either ear at a distance of two feet; nor, after careful experiments, could I detect any difference between the hearing powers of the two ears."

If Mr. Toynbee's view of the case is really the true one, the human auricle must be considered as merely typical, like the mamma of man. We have heard, however, that savages, whose very lives depend upon the acuteness of their hearing, have the power, like animals, of projecting the external ear towards the sound, like many animals of prey. The fact certainly would point to the conclusion that we lose a certain amount of the power of the external ear as we become civilised.

Mr. Toynbee devotes many pages to the consideration of Diseases of the External Meatus—the Method of Removing Polypi. The treatment of Chronic and Acute Inflammation of the Tissues lining the Meatus is fully entered into; and some most beautifully executed woodcuts illustrate the appearances to be seen in these diseases. The cases given are as minutely described as the woodcuts are elaborately drawn. The Diseases of the Membrana Tympani, also, are most minutely described; and the author's method of applying the artificial membrane is related. We do not intend to enter into the question, whether this substitute for the ruptured membrana tympani is more efficacious than the introduction of a simple plug of wetted cotton; but it strikes us that the latter is by far the more simple method of meeting the difficulty, inasmuch as the patient can assuredly more easily apply the remedy himself. Mr. Toynbee states, however, that he has applied the membrane successfully in "hundreds of cases".

Mr. Toynbee is of opinion that the very frequent use of the Eustachian catheter is unnecessary; and that cases of obstruction of the Eustachian tube can *always* be diagnosed without the use of this instrument.

"An opinion formerly obtained a certain degree of credence in the medical profession, that enlarged tonsils frequently press upon and close the Eustachian tubes. There can be no doubt this is erroneous. To convince himself that it is so, the surgeon has only to make an examination of the relative position of the tonsil and of the trumpet-shaped extremity of the tube; when he will find the tonsil situated from an inch and a quarter to an inch and a half below the tube, and placed between the palato-glossus and the palato-pharyngeus muscles, the latter muscle entirely separating the tonsil from the tube. He will also find the Eustachian tube close to the base of the skull, and against the basilar process of the occipital bone, and surrounded by the tensor and levator palati muscles, the function of which is, as already shewn, to open the tube. . . . . Nay, further, in cases seen by me, where the tonsils have been the largest, there has been no deafness—a fact which must also have been observed by other medical men."

In cases of obstruction of the faucial orifice of the Eustachian tube, by thickened mucous membrane, Mr. Toynbee recommends abundant and active exercise in the open air, and an abandonment of that coddling system of wrapping up the throat with comforters and handkerchiefs—an expedient which, in his opinion, is only likely to weaken it. The present fashion of turn-down collars should indeed strengthen this particular region; and, as a rule, we have no doubt that it will have that effect.

To the diseases of the Cavity of the Tympanum, a large portion of the book is devoted. The minute anatomy of the parts, together with the morbid appearances, are given in some very delicate woodcuts. The concluding chapters are devoted to Nervous Deafness, Malignant Diseases of the Ear, the Deaf and Dumb, and Ear-trumpets and their Uses.

Mr. Toynbee has succeeded in placing before the profession a most valuable volume on a subject with which it is but very imperfectly acquainted. The profusion with which his remarks upon the pathology of the ear are illustrated, both by cases and illustrations, renders his work quite a text-book. Neither has he neglected to give full information relative to his method of treatment. There can be little doubt that Mr. Toynbee's book will fill a niche in medical literature hitherto entirely vacant; and we can, with a good conscience, recommend it most heartily to the profession.

TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF LONDON. Volume I, for the Year 1859. London: Longman and Co. 1860.

THE Obstetrical Society, which started into life under such favourable auspices, have just issued their first volume of *Transactions*. The volume contains some very admirable papers, beautifully illustrated. As abstracts of these papers, however, have for the most part appeared in the pages of the JOURNAL, we need not further allude to them. Now the Society is established, and we have seen the amount of scientific investigation midwifery calls forth, we are lost in wonder at the contemptuous manner in which this department in medicine was in years past treated by the pures of both Colleges.

British Medical Journal.

SATURDAY, JUNE 9TH, 1860.

RECENT POISONING CASES.

WE hoped that the Administration of Poisons Bill would have at least baffled the designs of the coarser class of poisoners, and would have put an impediment in the way of those passionate persons who often take poison upon a sudden impulse, and repent of it afterwards. Within these last six weeks, however, no fewer than three deaths have been occasioned by the administration of deadly drugs. The first of these cases was the poisoning of Mr. Samuel Wells, at Seagrave, near Leicester, by his servant girl, Hannah Holmes. In the inquiry, it came out that arsenic had been passed from hand to hand as heedlessly as though it had been so much carbonate of soda. On the mere pretence that her master wanted to poison rats and sparrows, this wretched girl managed to obtain from the brother of the deceased *a quarter of a pound of arsenic*. There appears to have been no word of caution given; and the girl was allowed to help herself to no less than an ounce and a half of the death-dealing powder, a portion of which speedily sent her unfortunate master to his last account. It came out before the coroner that the arsenic had been procured from an oil and colour man at Loughborough, who had probably never heard of the Administration of Poisons Bill—at all events, he sold the drug in its uncoloured state, in direct contravention of that enactment, which provides that arsenic sold in smaller quantities than ten pounds shall be stained with soot. There can be little doubt that, if this tradesman had not given a too fatal facility for the purchase of this drug, the girl would have been saved from the gallows that in all probability awaits her, and a respectable family would not have to deplore the untimely fate of its head. It is but poor consolation to learn that Messrs. Astell and Co. are about to be prosecuted for their infringement of the Act; but we trust their punishment will serve as a wholesome warning to other arsenic-sellers to be more careful than hitherto in the manner in which they vend it.

The next case of poisoning we have to record is that of Elizabeth Harrison, who to all appearances administered to herself a dose of strychnine, a bottle of that drug being afterwards found in her box. Whence did this poor creature obtain it? Surely, in such cases as these, it is not sufficient for a jury to find a verdict of death—the police should be instructed to use all their endeavours to find whence the poison came, in order that the parties who were guilty of vending it may be brought to justice.

On the 6th of May last, a young girl, named Mary Jane Pope, was convulsed whilst in chapel at Peterborough, and she shortly died with all the symptoms of having taken strychnine; and on a *post mortem* examination, this proved to have been the

case. It was, however, shown that she had on the previous Saturday bought six pennyworth of Battle's vermin powder, which contains strychnine. Battle's vermin powder is most certainly not in the list of poisons, the sale of which is prohibited unless under certain restrictions; but it is very clear, from the number of casualties which have taken place referrible to the administration of vermin powders, bug-killers, rat-powders, etc., that these form the handy and "well accustomed" articles resorted to for evil purposes by the servant class of the population, and we have no doubt in some future emendation of the Poison Bill it will be found highly necessary to put the ban of the law on the promiscuous vending of these deadly substances, which, under the pretence of domestic necessities, find their way into the houses of dirty housewives.

The saddest case of poisoning we have to notice, however, is that of Mr. Fowler, of Chatham. In this instance, the individual lost his life by misadventure. Mr. Fowler, it appears, was suffering from rheumatic gout, to alleviate the pain of which his medical attendant thought it necessary to administer from time to time sedative medicines, from the effects of which he ultimately died. The inquest, however, most completely exonerated Dr. Burton from having acted without due caution in the administration of the narcotics he used—indeed, it was proved that he was more than usually careful in his doses, and that it was his misfortune to have met with an individual whose idiosyncrasy of habit with regard to opium could not have been anticipated. In justice to Dr. Burton, we append Professor Taylor's evidence in this case, in order to show how totally unfounded were the many insinuating reports set on foot in the neighbourhood detrimental to the character of the medical man whose misfortune it was to have been the innocent cause of death in this painful case.

"Professor Alfred Swaine Taylor—I am Fellow of the Royal College of Physicians, and Professor of Medical Jurisprudence at Guy's Hospital. I have heard all the evidence given, and made notes. I find up to Tuesday the 22nd, that is in a period of ten days, the deceased had taken ten grains of morphia; and there is no evidence whatever of any injurious effect upon the system up to that date. The medicine does not appear to have operated on the deceased, as is usual, in calming the excitement, in producing sleep, and relieving pain. Beginning from the Tuesday, I find that the deceased had taken two-thirds of a grain of morphia, and at night half a grain of morphia, making the total quantity of morphia one grain and one-sixth of a grain in a period of eight hours. The deceased had besides at eleven in the evening three pills containing altogether one and a half grain of opium. As far as I have heard the evidence, I find no ill effects from that opium or morphia. This carries us up to one o'clock on Wednesday morning: there had been no ill effects. Six pills were sent, and four taken; each pill is stated to have contained one-third of a grain of opium. The directions given were one to be taken every hour. The whole quantity of opium therefore in the four pills would be one and one-third of a grain of opium over the period of four hours at least. [Some conversation occurred here about a discrepancy in the evidence regarding the administering of the pills.] My opinion is that the symptoms were those of poisoning, by opium acting in a peculiar manner upon the deceased, from the fact that they were attended with severe convulsions, which is most unusual. Another fact is very peculiar, that deceased should have died from so small a quantity of opium given over a period of four hours. The smallest single dose that I have ever known to have killed an adult having been four grains of opium. This man died from little more than one-fourth of that quantity. I attribute the fatal effect of the small dose to a peculiarity of constitution which renders a person sometimes more susceptible of the effects of opium than others. The whole of the case shows a remarkable peculiarity in the effects of opium. I should attribute the fatal effects to the accumulation of the poison in the system, which for a time had combated its effects, and also in some measure to the diseased condition of body. The doses given, taking them altogether, were neither unusual nor immoderate, and as a general rule would not be attended with fatal effects. Dr. Burton was fully justified in prescribing as he did to relieve the severe pain, and in continuing the medicine when he found the first doses had not had effect. He would have been quite justified by medical experience in giving larger doses of opium on Weduesday morning; he acted with great prudence in reducing the dose to one-third of a grain per hour. Most practitioners would, I believe, have been inclined to have given larger doses from the absence of any effect from the former ones. A dose is generally from half to two grains for an adult—an average medium dose. Dr. Burton has always kept within that limit. Deceased died from the effects of opium."

After such evidence as this, taken together with that given by Dr. Adam Martin, the jury could have come to no other than the following verdict:—

"We find that Alfred Porter Fowler died from the accumulated effects of opium, administered to him for the treatment of rheumatic fever, and we consider from the medical evidence which has been produced, that Dr. Burton was justified in following out the treatment in the way he did, and that he exercised more than ordinary skill."

THE WEEK.

IT may be lawful or not—as the Attorney or Solicitor-General may read it—to subscribe money for the purpose of enabling Garibaldi to carry on the war of liberation in Sicily; but there can be no question of the lawfulness of attempting to provide the means of alleviating the sufferings of those patriots who may happen to be wounded whilst fighting under their great leader's banners. We feel much pleasure, therefore, in giving publicity to the fact that Mr. Sampson Gamgee has acknowledged, through the columns of the *Midland Counties Journal*, the receipt of the following gifts to be conveyed to General Garibaldi's quarters in Sicily, "by an able surgeon, who has been in the service of Her Majesty, and of the King of Sardinia":—

"From Mr. T. P. Salt, two best military tourniquets and a packet of needles.

"From Mr. Mappin, one second-hand complete field-case and one dozen band tourniquets.

"From Mr. Churchill, of New Street, two hundred opium pills, and one hundred quinine powders.

"From Mr. Morris, of Broad Street, one hundred opium pills, and eighty quinine powders.

"From Mr. A., two gross each quinine powders and opium pills.

"Each pill contains one-sixth of a grain, each powder three grains of the respective medicine."

Mr. Gamgee further states, in his letter to the journal in question, that "means have been taken to ensure the safe arrival in Sicily of the surgeon and his treasures"; and we may add, that we heartily trust both may escape the cruisers of the King of Naples.

The Medical Council is to meet on Thursday next, at the College of Physicians in Pall Mall. There will be plenty of work for the members. One thing which they will have to consider, will be the letter, by which their President a few weeks ago attempted to justify the acts of the Royal College of Surgeons. They will have before them, too, no small number of memorials and protests from practitioners in all parts of the country.

In the advertising columns of this day's JOURNAL appears a letter from Sir John Romilly, acceding to the proposal made to him of becoming a candidate for the representation in Parliament of the University of London, in the event of the franchise being granted to that body. The announcement, therefore, of his retirement from the contest, which we made a fortnight since, was erroneous, inasmuch as at that time he had not consented to become a candidate. The error arose from the unintentional misinterpretation of some statements made to us in conversation, from the recollection (imperfect, it appears) of which we made the statement referred to. There is now, then, no doubt that Sir John Romilly has consented to stand, on the strength of an invitation signed by two hundred and thirty one members of the University. It is to be trusted, therefore, that no fair means will be neglected to secure the return of the medical candidate. In the matter of the representation of a scientific body, mere party politics ought to have no place. What is especially wanted, in the present instance, is the return to Parliament of the man who is most likely to respect the interests of the medical profession, which is very largely represented among the University graduates, and which demands that it shall not be excluded from a voice in the legislature, while the professions of law and arms are abundantly supported. While the position and character of Sir Charles Locock are such as to entitle him to confidence on the part of the profession, there is every reason to believe, from the statements which he has issued, that he would do his best to promote any legislation conducive to the public welfare that might be brought forward.

At the Bail Court, on May 31st, Messrs. Thomas and Burroughs, surgeons, of Horsham, brought an action against a young gentleman of fortune named Holme, living in the neighbourhood, to recover the sum of £32 : 7 on a bill. The defendant paid £12 : 10 into court; £5 : 10 was irrespective of this particular case. The item of £27 was the one disputed, and was incurred under the following circumstances. On the 23rd of June, the defendant was at a party at Mr. Burroughs', when he had a violent fit of coughing, and a blood-vessel was ruptured. The defendant was at once put to bed in the plaintiff's house. He was constantly watched; he kept his bed for ten days, and his room for twelve days; he remained in the house fourteen days. On the 7th of July, he went to his father's, and afterwards to Worthing. His family visited him at the plaintiff's house. The defendant's father said he never could remunerate plaintiff for his kindness. The plaintiff had only charged for attendance and medicine. His charge was two guineas a day. Several surgeons were called, who stated that the charges were reasonable, under the peculiar circumstances of the case. The defence was, that the plaintiff was not entitled to the sum he claimed, but only to £7 : 9. This was a claim made in a moment of anger, and then both parties stood upon their strict legal rights. Rest, repose, and perfect inactivity, were the medicines that had cured the defendant. The defendant stated that every attention was paid him by the plaintiff's family, and the plaintiff visited him about six times a day. Defendant's father proposed to take defendant home after the coagulum came away, but the plaintiff said it would be more convenient for him to remain. Medical witnesses were called, who stated that they charged 3*s.* 6*d.* a visit; two visits a day would have been sufficient after the coagulum was discharged, but before that six or seven visits a day would be required. They thought the plaintiff's charges too high, as so many visits were not required. The jury found a verdict for the plaintiff for £6 : 4, being one guinea per day.

An inquest in a case of death from the incautious use of chloroform occurred the other day at Doncaster. The subject was Mrs. E. N. Mansell, wife of a commercial traveller. She had for years been in the habit of taking chloroform; and notwithstanding that both her medical attendants and her husband had used all means to prevent her obtaining it from the druggists, she was supplied with no less than five ounces. She took an ounce at a time, and on each occasion she went to bed to take it, her daughter, only ten years of age, attending upon her, and removing the cloth (upon which the chloroform was poured) from her mouth, when she thought she had had sufficient. The deceased took the last dose at nine o'clock, having procured it a short time before; and at ten o'clock the children, who were alone in the house, found her dead. It was shown that the deceased had procured the chloroform from Mr. Martin, druggist, against the wish of her friends. The jury returned a verdict that the deceased had died from an overdose of chloroform incautiously taken, and they further added, "The jury cannot separate without strongly censuring Mr. Martin for persisting to supply the deceased with such a dangerous agent after the repeated warnings of Mr. Moore, one of the medical men, and of Mr. Mansell; and the jury further recommended that in any future bill for the sale of poisons, chloroform be included under the same restrictions as other poisons."

Association Intelligence.

BRANCH MEETINGS TO BE HELD.

NAME OF BRANCH.	PLACE OF MEETING.	DATE.
SOUTH EASTERN. [Annual Meeting.]	Town Hall, Maidstone.	Wednesday, June 13th, 12½ o'clock.
BIRMINGHAM AND MIDLAND COUNTIES. [Annual Meeting.]	Hen and Chickens Hotel, Birmingham.	Friday, June 15th, 3½ P.M.
SOUTH MIDLAND. [Annual Meeting.]	Trustee Room of Harpur Charity, Bedford.	Friday, June 15th, 1 P.M.
EAST ANGLIAN. [Annual Meeting.]	Newmarket.	Thurs., June 21st, 2 P.M.
MIDLAND. [Annual Meeting.]	The Exchange Rooms, Nottingham.	Thursday, June 28.
LANCASHIRE AND CHESHIRE. [Annual Meeting.]	Manchester.	Thursday, June 28th.
NORTH WALES. [Annual Meeting.]	Royal Hotel, Rhyl.	Tues., July 3rd, 1 P.M.
BATH AND BRISTOL. [Annual Meeting.]	Mineral Water Hospital, Bath.	Thurs., July 12th, 3 P.M.

[To prevent delay, Reports of Branch Meetings should be sent direct to the office, 37, Great Queen Street.]

LANCASHIRE AND CHESHIRE BRANCH.

THE twenty-fourth annual meeting of this Branch will be held at Manchester, on Thursday, June 28th, under the presidency of M. A. EASON WILKINSON, M.D.

Gentlemen who intend to bring forward cases or communications are requested to send notice to the Honorary Secretary as early as possible.

A. T. H. WATERS, M.R.C.P., *Honorary Secretary.*

Liverpool, May 22nd, 1860.

BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING.

The Twenty-Eighth Annual Meeting of the British Medical Association will be holden in Torquay, on Wednesday, Thursday, and Friday, the 1st, 2nd, and 3rd days of August.

President—James R. W. Vose, M.D., F.R.C.P., Liverpool.

President-elect—C. Radclyffe Hall, M.D., F.R.C.P.L. and E., Torquay.

It is requested that all members who propose to read papers will communicate with

Philip H. Williams, M.D., *General Secretary*.

Worcester, March 29th, 1860.

Reports of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 22nd, 1860.

F. C. Skey, Esq., F.R.S., President, in the Chair.

ON TYPHUS AND TYPHOID FEVERS AS SEEN IN DUBLIN.

BY HENRY KENNEDY, M.D.

The object of the communication was to show that while these types or varieties might, in the great majority of instances, be distinguished the one from the other, they were still but the results of a common poison. To the distinctive marks between the two varieties he had drawn attention, in the *Dublin Medical Journal*, as far back as the year 1837, three years before the appearance of Dr. Stewart's memoir. The arguments for the identity of the poison, the author divided into general and special. Amongst the former, he particularly dwelt on the fact of different types of fever coming from the one room; such as cases with and without spots, or some with dark and others with rose spots, or the congestive, nervous, and gastric fevers, all existing in one family and at the same time. Amongst the special arguments the details of some cases were given where petechiæ existed, together with ulcerated bowels; and also cases of the same variety where the two rashes were mixed. The author also noticed the fact that intestinal hæmorrhage was at least as common in typhus as in typhoid fevers—contrary to what is usually thought. In conclusion, the author glanced at the views now held by many on the stimulant treatment of acute disease. He observed that the extent to which these doctrines were carried elsewhere had not reached Dublin, nor did he think they would; and he considered there were many points, directly involving the general question, which yet required the fullest consideration. Though the author did not enter at all on the general treatment of fever, he spoke of a few points having a special reference to the treatment of typhoid fever. In particular, he drew attention to the necessity for making a distinction between the stimulants in common use, of which wine and beef-tea were instanced. In his experience, the effects of the former were much less likely to be followed by any unpleasant results than those of the latter; and this he had remarked not only in fever, but also in some of the phlegmasiæ. The cause of this difference Dr. Kennedy attributed to the difference in the constituent parts of the two fluids. To the carbonate of ammonia he also directed attention, as being in general use; and yet, in his experience, he had found it very apt to cause diarrhœa, and latterly had entirely given it up. The medicine he now placed the most reliance on was the dilute sulphuric acid; and he had arrived at this conclusion after having tried the ordinary astringents. The acid, however, was not a new remedy. With the acid he always joined local treatment, such as leeching and blistering; nor of its efficacy—when used with ordinary discretion—had he the slightest doubt, notwithstanding all that had been recently urged against it. In the last place, the author spoke of a certain class of cases of typhoid fever in which it seemed as if the poison were flitting about the system, at one time attacking the abdomen, again the chest, or the brain. In such cases he had adopted the expedient of keeping a blister open, usually on the chest, for some days; and from this plan he had seen very marked advantage.

Editor's Letter Box.

THE CASE OF DR. BEETSON: MILITARY COURT OF INQUIRY.

Sir,—In perusing the case of Dr. Beetson, as reported in your Journal of June 2nd, and your editorial remarks at pages 419 and 425, one is led to exclaim: Is this the method of conducting a Military Court of Inquiry? The chief witness, General Budd, is not even called before the Court; and, in his absence, a letter is given in evidence, which proves to be the chief foundation for the charges laid against Dr. Beetson.

Of course, it must have been the urgency of the public service alone which prevented the General's being called before the Court. But by his letter (as it appears at page 426), we should judge that, had he been present, in any civil Court his evidence would for the most part have been set aside. He begins it by saying: "I have seen". What? He does not say; except that it is "enough". Then follows this remarkable style of commencing evidence:—"I heard"—"I have heard"—"I had heard"—"I doubt"—"I venture to say"—"I know nothing".

Let your brother associates put the question to themselves: How, after thirty-four years service, would they like to be exposed to such a mode of bringing charges and such a method of investigating them? And be it remembered, that very many of them have sons or brothers in this imminent predicament. I am, etc., Lex.

Near Plymouth, June 4th, 1860.

THE COURSE OF EPIDEMICS.

Letter from Reginald Burridge, M.D.

Sir,—I was very interested by a query from one of your anonymous correspondents, as to the law of epidemics; and I fear that my experience may go to prove an exception, rather than the rule.

A glance at a shaded map of the world during cholera times would seem to point to a direct, or not very indirect, march of that disease. About the year 1831, Plymouth was ravaged by cholera, which gradually spread to the city of Exeter, and was there more relatively fatal than in any other city in the United Kingdom except Glasgow. I may state, in passing, that the only case of recovery within my knowledge happened to a woman in the third stage of phthisis, where I was directed to give seven minims of croton oil every four hours, up to a drachm.

The disease extended to the neighbouring town of Cullompton, and several deaths occurred. A very few cases were imported into the town of Wellington; but it died a natural death, and never extended itself to Taunton, to which I beg to direct especial notice.

The Tauntonians began to plume themselves upon their immunity, their soil, climate, and so on. Very fine, most undeniably, they are. But mark the result. Cholera was rife in Bristol a very few years since. It worked its way down to Bridgwater, eleven miles away. After some scattered and intermediate cases of the kind, it pounced upon the Taunton Union Workhouse early one morning, and swept away several children and idiots before any sanitary measures could be enforced. It is but fair to say that the school-rooms and dormitories were very low, ill ventilated, and over crowded. I applied to some influential members of the Local Board of Health (then in its infancy), and succeeded in getting all sinks, sewers, and gutters, throughout the parliamentary borough, well dressed with quick-lime; and, under God's providence, the calamity was not propagated. An extensive exodus of all able-bodied paupers occurred; but they carried no available infection. The sick, the infirm, and children, were removed to a dilapidated building upon the Black Down Hills, which was formerly a lunatic asylum, a distance of about eight miles. There some cases of diarrhœa occurred; but no cholera, to my knowledge. About this time, Dr. Sutherland, a very acute and able man, was deputed by government to inspect the town of Taunton and its drainage. After duly weighing all the circumstances, he stated it as his deliberate opinion, that the disease had run to the dregs, and had expended its whole force of propagation. And such turned out to be the fact.

Let us now turn to another and most undeniably *contagious* epidemic—scarlet fever. This disease broke out with great violence in a large scholastic establishment in this town with which I was associated. A special hospital was established in a dwelling contiguous to my own; but several deaths took place from meningitis and effusion. At my suggestion, the pupils were dispersed to their respective homes. At this time, a noble and most magnificent collegiate hall was in process of erection; and, when it was duly completed, the pupils returned, and scarlet fever also, and dwelt there for three years, in spite of all that skill and science could suggest for its removal. I feel, therefore, compelled to endorse Dr. Thomas Watson's very sensible remark, that "there is no known limit to the *durability* of scarlet-fever poison", and that it is better not to commit one's self in decided opinion.

In conclusion, I beg to add a rather singular case.

Scarlet fever appeared in a school four or five miles to the south-east of Taunton. I exercised my privilege as friend and relative to remove several children to their respective homes, which were about sixteen miles off, at once. The children whom I thus and then transported had the disease *very slightly*, and communicated *no infection* to anybody. The original case, rather a severe one, ended well, and made no progress by way of infection.

If it be possible to reconcile such apparent anomalies as I have brought forward, we may hope to have "a law of epidemics". I am, etc., REGINALD BURRIDGE,

Late Senior Physician to Taunton and Somerset Hospital.

Taunton, June 1860.

Permit me to add, in the way of postscript, that when the scarlet fever may be well supposed to have been brought to a focus in that special hospital of which I spoke, and tempted, as it were, to virulent action and extension, no case occurred in the vicinity; whereas cases never ceased to occur in the original building, until the final breaking up of the establishment was decided upon.

THE ANNUAL MEETING OF THE ASSOCIATION.

LETTER FROM C. RADCLYFFE HALL, M.D.

SIR,—In common with many other members, I have long thought that something might be done to develope to a greater extent the scientific features of the Annual Meetings of the British Medical Association. Men will not produce valuable papers, and drawings, and specimens, for our meetings, unless they are assured of a suitable opportunity for reading and showing them, and of a fair chance of an untired audience. An audience fatigued by a prolonged business-sitting will not await, or, if they do, will attend but listlessly to a paper which they are not certain will not prove lengthy and tiresome.

Heretofore, business-conversation has occupied more than a due or perhaps remunerative proportion of our time at the anniversary meetings. Now, however, that few vexed questions remain, it may be expected that we shall have more time at our disposal for scientific purposes. Good papers would not be wanting, were good arrangements for their delivery certain and fixed beforehand. I venture, therefore, to appeal to my brother-associates for suggestions. How can we manage to improve our existing plan, which is to take all papers in the order of their notice after all other business is disposed of—perhaps, say, the last hour or two of the last day, when every one is fatigued with sitting, listening, and talking? I discussed last year with Sir Charles Hastings the question of sectional arrangements; but it seemed impracticable. Would it be impossible to devote the Friday of our meeting entirely to the address appropriated for that day, and to papers, insisting that business must manage to end itself by the Thursday evening? One reason why more time than is needed is usually occupied by business might readily be obviated, if those members who feel an interest in a given business point would manage to attend from the commencement. It constantly happens that the same subject is discussed twice over, because new men come in who were not present at the first. To rule that a rediscussion shall not be allowed causes dissatisfaction to those who have not already expressed their views. To hear the same opinions and arguments over again, on the other hand, is very wearisome to the rest. Perhaps, if members would inform the Secretary of any business points which they intend to bring forward, the Council could manage to publish beforehand, in the JOURNAL, the order in which subjects would be taken. Even then, when a number of gentlemen enter into discussion, their course is a little discursive, and their rate of progress uncertain. So far as I know, it might be managed to devote the Friday to non-business matters.

Then, as to contributors. A lengthy paper may be required to do justice to the author's arguments; but it is scarcely needed to give expression to such of his conclusions as are new and interesting. Might it be admissible to fix a maximum limit of time, within which a paper, or its abstract, must be confined—say twenty minutes or half an hour? and a maximum limit of time for the remarks upon that paper of one speaker—say five minutes, or ten? I wish to ask the opinion of my fellow-associates on these points beforehand; to glean any pertinent suggestions from them; so that, if possible, we may be enabled to inaugurate a satisfactory method of working at the forthcoming meeting at Torquay. Method is chiefly what we are in need of. We have already the promise of good *matériel*. Cornwall supplies the address in medicine; Exeter, that in surgery; Plymouth, an address on ophthalmic surgery. Dr. Brown-Séquard is first on the list of contributors of papers. Other names that will ensure attention will follow, if we can only ensure them a due and proper hearing.

Trusting that this note may elicit the expression of opinions—not anonymous—from which something practicable and permanently useful may arise, I am, etc.,

C. RADCLYFFE HALL.

Torquay, June 4th, 1860.

THE PHYSIOLOGICAL EFFECTS OF OPIUM.

LETTER FROM GEORGE BODINGTON, L.R.C.P.E.

SIR,—In a leading article of last week, you allude to the "perils encountered by medical men" in respect of the physiological effects of drugs, and in reference to a coroner's inquest at Brompton in a case of death after the exhibition of opium.

First, let me assume that every practitioner having the special charge of and medical treatment of the insane, must necessarily have an extended experience in the administration of medicinal narcotics. Having been so engaged for many years, I beg to offer a few practical remarks on the subject.

Of course, it is nothing new to remark, that in delirium tremens, very large doses of opiates may be given, not only with impunity, but with almost certain advantage. I will not say what quantity of morphia may have been given, as that is the more dangerous form of the drug, but that from two drachms up to six of laudanum per dose has been often attained in delirium tremens is well known to experienced practitioners. Under what circumstances, then, does it occur that the drug so administered becomes comparatively innocuous? It is when the system is, so to speak, saturated with alcohol. On the other hand, the smallest dose given to patients who are mere water or tea and coffee drinkers, exclusively of alcoholic beverages, has an almost instantaneous and very powerful effect. Here is an instance in point. A lady, entirely a teetotaller, was seized with a catarrh and with severe coughing. An eight-ounce almond emulsion was prescribed, containing only about half a grain of morphia, of which she had taken about a fourth or a third part, when she fell into a complete state of syncope, and was restored by the dashing of cold water in her face and by the exhibition of stimulants. These occurrences are, I believe, frequent in general practice, and well known to the profession. The point appears to be this. Had the lady in question been in the daily habit of drinking a moderate quantity of wine or of other alcoholic beverage, no such sudden effect from so small a dose of morphia would have ensued. Contrasting this case with the effects of opium in cases of delirium tremens, the controlling powers of alcohol over the physiological effects of the drug are obvious.

It seems, then, that the use of the drug should be guided especially by the previous habits of the patient. The modern salts of the drug seem to be the most dangerous form in which it can be given. The native opium contains constituent ingredients of a contrary character which are counteractive of each other. Laudanum, holding all these in solution, is the safest form; inasmuch as the alcohol, the solvent, in some measure acts as an antidote. In practice, contraindications to either of these forms of exhibiting the drug frequently are present. In the treatment of lunatic patients, with whom the use of sedatives is of the first importance, my practice is to give Battley's sedative drop in preference to any other form of opiate, in a little brandy and water or sherry wine, this vehicle obviating the tendency to prostration or syncope which in some constitutions and under certain conditions might ensue. I am not

aware that morphia administered in a similar manner would not have as good an effect.

These remarks are intended solely to apply to the question generally of administering opium, and not in the least to the case on which the inquest was held at Brompton, the particulars of which were not stated, although it may be presumed that the profession generally will consider the verdict, "That the deceased died from the accumulated effects of opium," as anything but satisfactory, and as not in the least calculated to inspire confidence. I am, etc.,

GEO. BODINGTON, L.R.C.P.E.

Driffold House, Sutton Coldfield, June 4th, 1860.

BLOOD-LETTING IN FEVER.

SIR,—I herewith beg to send you for the BRITISH MEDICAL JOURNAL, a copy of a letter which I addressed, forty-five years ago, to the late John Burns, Professor of Surgery in the University of Glasgow, thinking its contents may be acceptable to many of our associates. I am, etc.,

J. B.

"Glasgow, December 4th, 1815.

"Sir,—In your inculcating this morning the decided utility of blood-letting in fevers, even of a partial typhoid nature, whether in this country or in hot climates, some facts naturally recurred to my mind (in complete apposition, I thought, to the doctrine under your review), namely, the extent and phenomena of blood-letting I had occasion to observe last summer in the West Indies; and I humbly hope that the desire to communicate them, though not very important of themselves, will serve as some apology for intruding them on your leisure.

"During the months of April and May last, upwards of forty men of the ship I belonged to, while on the Leeward Island station, were successively attacked with the endemic remittent of the country, and venesection was carried to a very great extent, the quantity of blood drawn in each patient ranging from sixty to near two hundred ounces in the space of two or three days; the consequence of which depleting plan was recovery in every case.

"On the first attack, thirty ounces were immediately taken away, or the patient was generally bled to syncope, and the bleedings were repeated, often from the same orifice, in a few hours afterwards, or from incisions in the opposite arm, in frequency and extent as the symptoms of vascular action arose and indicated. The pulse, before the insertion of a lancet, was generally small, wiry, or hard; sometimes quick and tremulous, with much depression of the nervous system, and with sensations of much debility, irregular chills and heats; but it became fuller and rose in strength, in a pretty direct ratio with the extent of the bleeding, and the system seemed to gain fresh action, a more phlogistic circulation, and as if it had been let at liberty from some oppressive power.

"Being an early subject of an attack, I had not the opportunity of witnessing the incipient features of many of the cases; but when they arrived at the hospital, after copious bleedings on board, the fever still assumed, in the majority of cases, its bold obvious character—exhibiting a strong vascular over-action, as violent headache, pains about the region of the stomach, painful suffused eyes, florid blushing countenances, and hot unperspiring skins; but, after renewed venesection, the system recovered its equilibrium, the appetite in a few days became keen, and very little or no emaciation followed the severest attacks.

"The few observations these cases gave rise to in my mind were:—

"1. That the sensations and symptoms of debility in the attack were fallacious, and the greater or less extent of nervous depression and mental despondence were followed by a corresponding degree of arterial action.

"2. That bleeding during a period of chilliness, sickness, or vascular depression, increased the nervous sensibility and weakness, and was less efficacious than when an evolution of heat and action took place; and I thought that venesection then was even somewhat hurtful, and laid the foundation for a more formidable reaction when this again took place.

"3. That the system seemed, as it were, to generate blood in preternatural quickness, as if venesection was a stimulus to sanguification; or that the lancet had let loose a latent reservoir of blood, so little did the patients seem to feel the loss of a great quantity.

"4. That the tepid bath elicited the type and paroxysm of the fever, and allowed a fresh quantity of blood to be withdrawn, as opening a vein in its imperfect or irregular formation was followed by syncope, or a trifling flow of blood.

"5. That the blood drawn did not exhibit any extraordinary inflammatory crust, or that this tended much to concavity on its upper surface; and that doses of a scruple of calomel and half a drachm of jalap scarcely produced any desired effect before the violence of the disease was subdued by the lancet, the 'sheet anchor', as it was termed, of the patient's life.

"This curtailed statement of the above simple facts can add little corroboration to a practice generally adopted, in the Navy at least; but as isolated examples of the successful issue of copious blood-letting in fevers, they are respectfully laid before you, and

"I am, sir,

"Your most obedient humble servant,

"J. B.

"To John Burns, Esq., Professor of Surgery."

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Of sons, the wives of—

*HENDERSON, William, M.D., Clifton, Bristol, on May 29.

HOUNSELL, H. Strangway, M.D., Bridport, on June 4.

JONES, James, M.D., Woburn Place, on May 2.

*MARTYN, Samuel, M.D., Bristol, on June 1. (Stillborn.)

Of daughters, the wives of—

CHAMBERS, Thomas, M.D., Grove Road, N.W., on June 1.

COOPER, W. White, Esq., Berkeley Square, on June 3.

SHAW, Archibald R., M.D., Upper Clapton, on June 2.

Of twins, a boy and girl, the wife of—

BACOT, J., Esq., Staff-Surgeon, at Pembroke Dock, on June 3.

MARRIAGES.

DAY, Wm. H., M.D., of Newmarket, to Emma, elder daughter of Wm. C. KITCHENER, Esq., of the same place, on May 30.

HERFORD, Captain Ivan, 90th Regiment, to Marion J. C., fourth daughter of the late Anthony T. THOMSON, M.D., at Prestbury, on May 23.

SMITH, Frederick H., M.D., Blackheath Road, to Gertrude A., third daughter of the late Thomas C. BURNETT, Esq., of Madeira, at Greenwich, on June 5.

WOOD, Robert H., Esq., Surgeon, Leicester, to Mary Ann, only daughter of Edwd. MARR, Esq., St. John's Wood, on June 2.

DEATHS.

BUCHANAN, Moses, M.D., at Glasgow, suddenly, on June 4.

MACKENZIE. On May 30, at Dublin, aged 6 weeks, Mary S. A., youngest daughter of W. Ord Mackenzie, M.D., Surgeon Major 3rd Light Dragoons.

MCDONALD. On May 27th, at Gosport, Jane, wife of Thomas W. McDonald, Esq., Deputy Inspector-General of Hospitals and Fleets.

THOMSON. On May 26th, at Tenby, drowned while bathing, John Cockburn, youngest son of the late Anthony T. Thomson, M.D.

WOOLLEY, George, M.D., at Kensington, aged 77, on May 30.

APPOINTMENTS.

HARDWICK, Robert G., M.D. } appointed Physicians to the
*SMITH, G. Pyemont, M.D. } Leeds Public Dispensary.

PASS LISTS.

APOTHECARIES' HALL. LICENTIATES admitted on *Thursday, May 31st*, 1860:—

BEER, James Jno., Clerkenwell
MCMANUS, Owen, London

The following gentlemen also, on the same day, passed their first examination:—

BEST, P., University College
EDDOWES, Wm., King's College
FURSE, E., University College
HEDLEY, Edward A., Felton, Northumberland
LEECH, Abraham, Manchester

For an assistant—

CROOK, Peter Ditchburn, Durham

THE LONDON MEDICAL REGISTRATION ASSOCIATION.

THE special general meeting of this Association, convened by public advertisement to consider the new rules proposed, and the consequent reorganisation of the body, took place at the Freemasons' Tavern on the evening of Thursday, the 31st of May. Mr. Fergusson the President, took the chair, and delivered an address, stating the objects which had been held in view in framing the new regulations. These were then read and considered *seriatim*. Various amendments were introduced; many of them being adopted on the recommendation of Mr. A. B. Steele, the Honorary Secretary of the Liverpool Medical Registration Association, who attended on a special mission from that body, and very clearly represented to the meeting the feelings which actuated the provincial Registration Associations. The great feature of the new rules is, that the whole of the Associations affiliated with that of the metropolis will be now consolidated into one "National Medical Registration Association", the local bodies sending representatives to the Committee. A Sub-Committee of the metropolitan branch is now engaged in the work of digesting the various suggestions of the local branches for an improvement of the Medical Act, and it is expected that they will embody these, together with their own views, into a memorial for presentation to the Medical Council at their meeting.

The following correspondence has taken place between the Honorary Secretary (*pro tem.*) of the metropolitan branch, and two practitioners whose names have appeared in the published list of members of the London Medical Registration Association:—

"The London Medical Registration Association,
"5, Charing-cross, London, S.W., May 24th, 1860.

"SIR,—It having been communicated to the Committee of this Association that you are practising as a homœopath, I am directed to inquire if the information they have received is correct, as, in the event of it being so, the Committee will have no alternative but to strike off your name from the list of the members of this Association.

"I am, Sir, your obedient servant,
"FREDK. DOVER, Hon Sec. *pro tem.*"

To one of these letters the following answer was received:—

"MY DEAR SIR,—In reply to your communication, I beg to state that I have practised homœopathically for nearly twenty years; that, when I was applied to to become a member of your Association, I was told that my doing so was no hindrance so long as I was qualified; that, finding from the last report that homœopaths were excluded, I did not renew my subscription, and consequently considered that I had ceased being connected with your body.

"I am, my dear sir, your obedient servant,
"THOS. ENGALL.

"15, Euston Square, May 24th, 1860."

The other letter not having been responded to, the following was addressed:—

"The London Medical Registration Association,
"5, Charing-cross, London, S.W., May 30th, 1860.

"SIR,—Not having received any reply to my note to you of May the 24th, I presume the information the Committee have received is correct, and therefore they will act accordingly.

"I am, sir, yours faithfully,
"FREDK. DOVER, Hon. Sec. *pro tem.*

"J. B. Metcalfe, Esq."

The names of the gentlemen addressed as above by the Honorary Secretary (*pro tem.*) have consequently been removed from the list of members of the Association.

THE MEDICAL COUNCIL for the United Kingdom will assemble at the Royal College of Physicians, on Thursday next, the 14th instant.

LUNATIC ASYLUMS IN SPAIN. Dr. Desmaisons has lately published a work on asylums in Spain, in which he states that institutions of the kind were first opened in that country early in the fifteenth century. At Valentia, an asylum was established in 1409; at Saragossa, in 1425; at Seville and Valladolid, in 1436; and at Toledo, in 1483.

AMERICAN MEDICAL ASSOCIATION. The meeting of this Association was, we learn from the transatlantic periodicals, fixed to be held in New Haven, commencing on the first Tuesday in June (last Tuesday).

PROPOSED TESTIMONIAL TO E. A. PARKES, M.D. On Friday, June 1st, a meeting was held by the students of University College, London, for the purpose of considering the best method of testifying the universal respect entertained for Dr. Parkes, late Professor of Clinical Medicine at University College Hospital. Dr. Edwyn Andrew was in the chair. After a preliminary address by the chairman, the following resolutions were adopted.

1. Proposed by Mr. TEEVAN, seconded by Dr. BUCHANAN—
"That this meeting observes with great regret the resignation of Dr. Parkes, who has been connected with this institution for so many years, and who by his uniform kindness, as well as his great talents as a professor, and especially by his unwearied exertions as a teacher of clinical medicine, has obtained the esteem and respect of all with whom he has come in contact.
"That, as a small acknowledgment of his great qualities and valuable services, an address, together with a testimonial (the nature of which to be afterwards decided on by the Committee), shall be presented to him at the earliest time possible."

2. Proposed by Mr. W. J. SMITH, seconded by Mr. DAWSON—
"That a communication be made to the present and former pupils, fellow-students, and colleagues of Dr. Parkes, who may be willing to aid in this movement."

3. Proposed by Mr. POWER, seconded by Mr. GIBSON—
"That a Committee be at once formed, to obtain subscriptions to carry out this desirable object."

The Treasurer is Dr. Edwyn Andrew, of University College Hospital; and Mr. Sydney Ringer and Mr. Eustace Smith act as Secretaries.

SENTENCE ON A FRENCH BONE-SETTER. On August 26th, 1859, an infant aged 15 months, in the department of Mayence in France, fell from the arms of a little girl who was carrying it. A bone-setter, named Lefaux, a farmer, was called in. He declared the thigh to be fractured, employed extension and violent pressure, and, after wrapping the thigh in a handkerchief soaked in soap and water, he left, promising to return in a fortnight, but first receiving a fee of sixteen *francs*. At the end of the fortnight, he did not come, and messages were sent to him in vain. In the meantime, a large abscess had formed, and the ends of the bone had become exposed. A medical man was then called in, and succeeded in procuring union of the bone only at the end of five months, and at the expense of considerable shortening of the limb. An action was brought by the father of the child against Lefaux; who, on February 25th, was condemned to a fortnight's imprisonment, to a fine of two hundred *francs*, and to the payment of a thousand *francs* damages to the child, and the expenses to which the father had been put in the course of the illness.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH. During the "year of grace", nine hundred and thirty-eight practitioners, according to the lists published in the *Edinburgh Medical Journal*, have been admitted licentiates of this College.

HEALTH OF LONDON—JUNE 2ND, 1860.

[From the Registrar-General's Report.]

	Births.	Deaths.
During week ..... {Boys.. 766 / Girls.. 751}	1517	.. 1004
Average of corresponding weeks 1849-58	1509	.. 1088

Among the causes of death were—bronchitis, 74; pneumonia, 50; phthisis, 156; small-pox, 17; scarlatina, 27; measles, 51; diphtheria, 7; hooping-cough, 33. The deaths from pulmonary diseases (exclusive of phthisis) were 142, being 5·0 below the corrected average.

Barometer:
Highest (Tu.) 29·879; lowest (Sat.) 29·144; mean 29·578.

Thermometer:
In sun—highest (Fri.) 110·0 degrees; lowest (Th.) 65·0 degrees.
In shade—highest (Fri.) 66·3 degrees; lowest (Tu.) 38·8 degrees.
Mean—51·3 degrees; difference from mean of 43 yrs.—4·5 degrees.
Range—during week, 27·5 degrees; mean daily, 17·1 degrees.
Mean humidity of air (*saturation* = 100), 78.
Mean direction of wind, Var.—Rain in inches, 1·53.

TO CORRESPONDENTS.

Members should remember that corrections for the current week's JOURNAL should not arrive later than Wednesday.

Communications have been received from:—DR. LIONEL BEALE; MR. H. DUNCALFE; MR. JOSEPH WHITE; DR. MACRORIE; MR. EUSTACE SMITH; MR. J. K. SPENDER; DR. MARTYN; DR. A. T. H. WATERS; DR. THOMAS SKINNER; DR. WHYTEHEAD; DR. JAS. RUSSELL; MR. GEO. BODINGTON; DR. C. RADCLYFFE HALL; DR. B. CHEVALLIER; MR. E. L. HUSSEY; MR. EVANS; REGISTRAR OF THE MEDICAL COUNCIL; DR. G. P. SMITH; MR. OLIVER PEMBERTON; MR. H. TERRY, JUN.; DR. W. HINDS; MR. T. L. PRIDHAM; MR. J. V. SOLOMON; MR. W. H. ALDERSEY; MR. R. W. TAMPLIN; MR. R. S. FOWLER; and MR. J. S. GAMGEE.

Aërated Lithia Water. — The

exhibition of Lithia in an effervescent water having been suggested by Dr. GARROD (in his recent treatise on Gout and Rheumatic Gout) as a remedial agent, by reason of its great power in dissolving Uric Acid and the Urates, Messrs. BLAKE, SANDFORD, & BLAKE have prepared three different Waters—of LITHIA, LITHIA with POTASH, and LITHIA with AMMONIA, which they beg to introduce to the Profession.

The following Waters are prepared as usual:—Potash, containing 18 grains of the Bicarbonate in each bottle; Citrate of Potash, 30 grains; Soda, 15 grains; Ammonia, 10 grains; Seltzer and Vichy, from their respective analyses; and a very delicious, as well as useful, MINERAL ACID WATER.

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ADDRESS TO THE MEDICAL PROFESSION.

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Dr. J. C. BROWNE discovered and named this extraordinary remedy, and confided its manufacture solely to J. T. DAVENPORT, 33, Great Russell Street, Bloomsbury; therefore the assumption of the name or title of the word to any mixture or compound but the genuine is a gross and palpable deceit and representation of what is not true. Physicians and Practitioners are impressed with the necessity of remembering this fact, and when prescribing using the words Dr. J. COLLIS BROWNE'S Chlorodyne.

Price to the Profession, 3s. per fluid ounce, and in quantity of 10 ounces carriage free. The genuine bears a red stamp, with the words Dr. J. COLLIS BROWNE'S Chlorodyne, in white letters, over each bottle, and the signature of J. T. DAVENPORT on the label inside.

S. Bowles (late Windsor & Co.), Phial

AND BOTTLE MERCHANT, Dealer in Druggists' Sundries, etc., 6, JAMES STREET, COVENT GARDEN, W.C. The cheapest house in London for every description of Medical Glass of the best quality. Samples and prices forwarded free on application.

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½ oz., 1 oz., 10 dr., & 1½ oz.	per Gross,	6s.
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3 oz.	„	8s.
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6 oz.	„	15s.
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4½ oz. graduated in 3 doses	„	12s.6d.

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6 and 8 oz., any shape, plain, or graduated	8s. 0d.	per gross.
3 and 4 oz. ditto ditto	7s. 6d.	„
½ oz. Moulded Phials	4s. 6d.	„
1 oz. ditto	5s. 6d.	„
1½ oz. ditto	6s. 0d.	„
2 oz. ditto	7s. 0d.	„

NOTICE.—S. ISAACS & SON beg to return their sincere thanks to the Medical Profession for past favours, and beg to inform them that in consequence of the great increase in their business, they have removed to more extensive premises, and hope by adhering to their usual attention and punctuality to receive a continuance of their favours at their new London Warehouses, 24 and 25, Francis Street, Tottenham Court Road. Packages free. Remittance on receipt of Goods Post-office Orders payable to S. ISAACS and SON, at the Post Office, Tottenham Court Road. Bankers—Unity Bank.

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NEW MEDICAL GLASS BOTTLES and PHIALS, at the Islington Glass Bottle Works, Islington Place, Park Road. LONDON WAREHOUSES—19, Bread Street Hill, Upper Thames Street, City, and 2, Upper Copenhagen Street, Barnsbury Road, Islington. E. & H. HARRIS & Co., beg to submit the following prices for quantities of Six Gross, assorted to suit the convenience of the purchaser.

6 and 8 oz., any shape, plain, or graduated	clear	8s. 0d.	per gross.
3 and 4 oz. ditto ditto ..	blue tinted	7s. 6d.	„
½ oz. White Moulded Phials	of a very superior quality.	4s. 6d.	„
1 oz. ditto		5s. 6d.	„
1½ oz. ditto		6s. 0d.	„
2 oz. ditto		7s. 0d.	„

Immediate attention to country orders. No remittance required until the Goods are received. Packages free. Goods delivered free within seven miles. Post-office Orders made payable to E. & H. HARRIS & Co., at the Chief Office, London. Bankers—Union Bank of London.

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Mildew. — GISHURST COMPOUND, patented for killing and keeping away these and other animal and plant pests. Names of eminent authorities who have given testimonials to its success are advertised in *Gardeners' Chronicle, Cottage Gardener*, and *Field*.

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ESTABLISHMENT, 9, York Place, Baker Street, Portman Square, for the extraction of Mercury and other Metallic or Extraneous Substances, and the Treatment of Chronic Diseases. For the demonstration of this new system, *vide* the Second Edition, price 1s., 8vo, of Dr. Caplin's Treatise on the Electro-Chemical Bath, and the Relation of Electricity to the Phenomena of Life, Health, and Disease. Sold at the Author's Establishment.

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Ordinary to Her Majesty, respectfully invite attention to their PICKLES, Sauces, Tart Fruits, and other table delicacies, the whole of which are prepared with the most scrupulous attention to wholesomeness and purity. The practice of colouring pickles and tart fruits by artificial means has been discontinued, and the whole of their manufactures are so prepared that they are not allowed to come in contact with any deleterious ingredient. A few of the articles most highly recommended are, Pickles and Tart Fruits of every description, Royal Table Sauce, Essence of Shrimps, Soho Sauce, Essence of Anchovies, Jams, Jellies, Orange Marmalade, Anchovy and Bloater Pastes, Strasbourg and other Potted Meats, and Calf's-foot Jellies of various kinds for table use. C. and B. are also sole Agents for M. Soyer's Sauces, Relish, and Aromatic Mustard; and for Carstairs' Sir Robert Peel's Sauce, and Payne's Royal Osborne Sauce. The above may be obtained of most respectable Sauce Vendors throughout the United Kingdom; and Wholesale of

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Lichen Islandicus, or Iceland Moss

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